GV-300

SERVICE MANUAL

US Model
Canadian Model

VIDEO
WALKMAN

SPECIFICATIONS

System

Video recording system	Rotary two-head helical scanning FM system
Audio recording system	Rotary head, FM system
Video signal	EIA standard, NTSC color
Usable cassettes	8 mm video format cassettes
Tape speed	SP: approx. 1.43 cm/sec. LP: approx. 0.72 cm/sec.
Recording time	SP mode: 2 hours LP mode: 4 hours (with Sony P6-120 cassette)
Playback time	SP mode: 2 hours LP mode: 4 hours (with Sony P6-120 cassette)
Fast forward/rewinding time	Approx. 6 minutes (with Sony P6-120 cassette)

LCD section

Picture	4 inches measured diagonally 8.2 × 6.2 cm (3 1/4 × 2 1/2 inches)
On-screen display	TN LCD/TFT active matrix method Total picture-element number: 112,086 (479 × 234)

Tuner section

Channel coverage	VHF: 2 – 13 channels UHF: 14 – 69 channels Cable TV channels: A-8 – A-6, A-2 – W, W + 30 – W + 84
Antenna input	75-ohm minijack for VHF/UHF

Inputs/outputs

VIDEO/AUDIO IN/OUT	Selectable automatically according to the operation
Video input	Phono jack, 1 Vp-p, 75 ohms, unbalanced, sync negative
Video output	Phono jack, 1 Vp-p, 75 ohms, unbalanced, sync negative
Audio input	Phono jack, – 7.5 dBs (0 dBs = 0.775 Vrms), input impedance more than 47 kilohms
Audio output	Phono jack, – 7.5 dBs (330 mV) at load impedance 47 kilohms, output impedance less than 10 kilohms
Speakers	16 ohms, 150 mW
Earphone	Stereo minijack, 8 ohms × 2
CONTROL S	Minijack
Camera input	12-pin

Timer section

Clock	Crystal lock
Time indication	12-hour cycle
Timer setting	Only for recording, 1 event/24 hours

MICROFILM

General

Power requirements	Battery mounting surface input: 6.0 V (battery pack) DC jack input: 7.5 V (AC power adapor), 6.5 V (DC pack DCP-77)
Power consumption	6.9 W (for continuous playback)
Operating temperature	0°C to 40°C (32°F to 104°F)
Storage temperature	– 20°C to 60°C (– 4°F to 140°F)
Dimensions	129 × 71 × 226 mm (w/h/d) (5 1/8 x 2 7/8 x 9 inches)
Weight	Approx. 1.1 kg (2 lb 7 oz) not incl. battery pack
Accessories supplied	Stereo earphones (1) Signal splitter (1) Carrying case (1) Battery pack NP-77 (1) AC power adaptor AC-V50 (1) Lithium battery (1)

AC-V50

Power consumption	23 W
Power requirements	100 – 240 V AC, 50/60 Hz
Output voltage	DC OUT: 7.5 V, 2 A in operating mode
Battery charge terminal:	10 V, 1.3 A in charge mode
Operating temperature	0 C°to 40°C (32°F to 104°F)
Storage temperature	– 20°C to 60°C (– 4°F to 140°F)
Dimensions	Approx. 71 × 45 × 144 mm (w/h/d) (2 7/8 × 1 13/16 × 5 3/4 inches) including projecting parts and controls
Weight	Approx. 400 g (14 oz)

Design and specifications are subject to change without notice.

— Continued on next page —

For MECHANICAL ADJUSTMENT, refer to the "8mm Video MECHANICAL ADJUSTMENT MANUAL III (U MECHANISM)" (9-972-732-11)

8 VIDEO TV RECORDER

SONY®

LIST OF RECOMMENDED ACCESSORIES

	Model name	Page
Battery pack	NP-77H, NP-66H, NP-55	11
Battery charger	BC-77	
Car battery charger	DC-V30	11
DC pack	DCP-77	17
Color video camera	CCD-G1	56
Antenna connector	EAC-40	54
Signal splitter	EAC-45	54
Antenna cord	CCD-6M, CCD-2	54
Car antenna	VCA-3W, VCA-4E	54
Pan tilter	HVR-200	59
Connecting cord	VMC-910MS/920MS (1m/2m) VMC-810S/820S (1m/2m) VMC-710M/720M (1m/2m)	60
Car connecting pack	CPA-2	
Video walkman hood	VCV-GV300	
Cleaning cassette	V8-25CLH	70
RFU adaptor kit	RFU-89UCKA	63

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the B+ voltage to see it is at the values specified.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITE!

LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

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SECTION 1
GENERAL

This section is extracted from instruction manual.

Features

The "Video Walkman" GV-300 is an 8mm video recorder with a LCD (Liquid Crystal Display). Its compact and lightweight design allows you to watch TV programs and video tapes anywhere and anytime you like.

With this video TV recorder, you can:
- — view the playback picture of 8 mm video tapes.
- — view TV programs.
- — record TV programs.

In addition, by connecting it to a video camera (not supplied), you can record pictures with the camera, and play back the recorded pictures on it immediately.

Other features

- — **Hi-fi stereo for high quality sound ***
- — Stereo TV tuner for enjoying stereo programs
- — Index function for finding the desired scenes quickly
- — CRYSTAL-CLEAR still/slow/picture search on LCD
- — Timer-activated recording
- — SLEEP timer for turning off the unit automatically
- — MEGA BASS circuit for dynamic bass sound

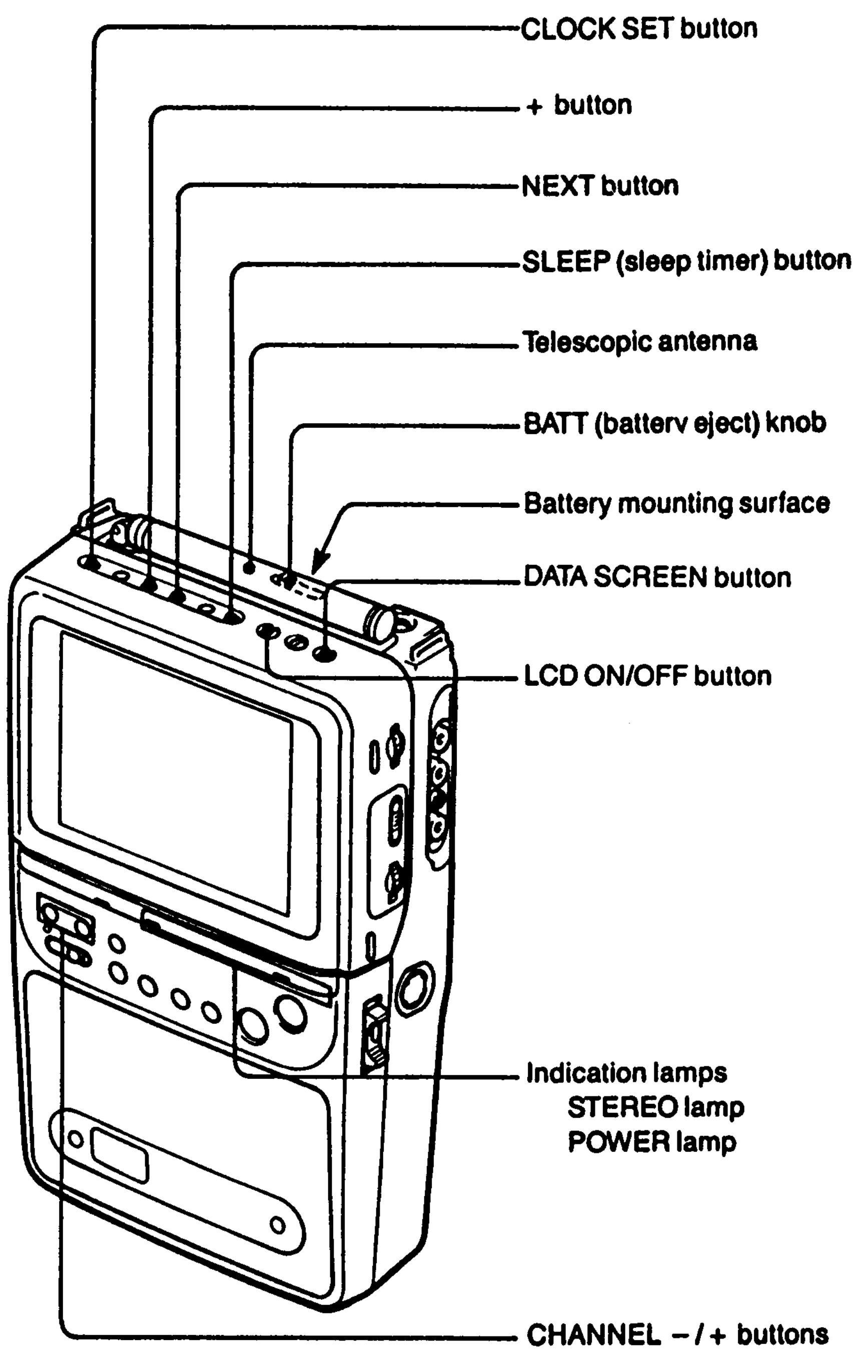
*** Hi-fi Stereo System**

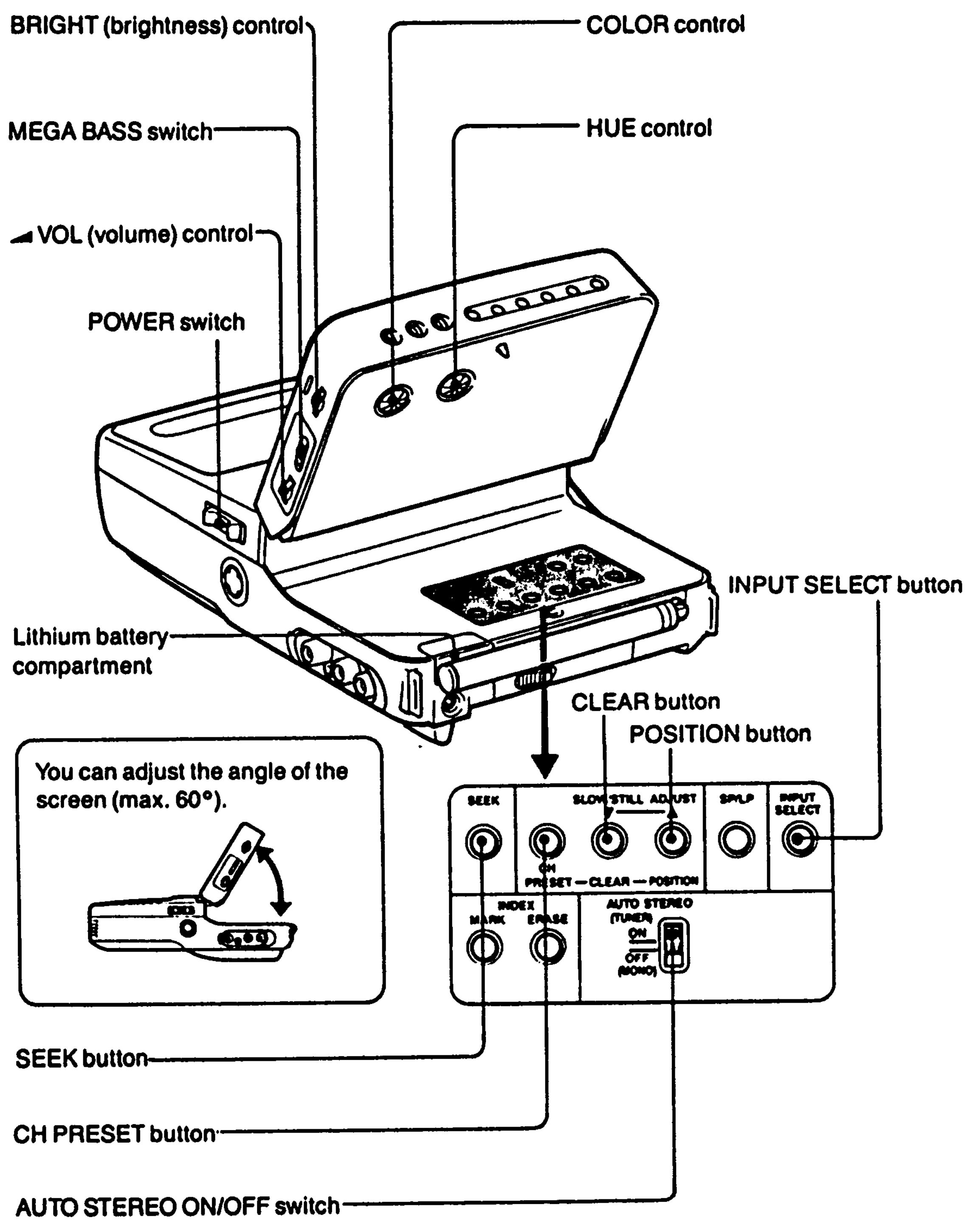
On the 8 mm video standard track, the sound is recorded/played back in Hi-fi monaural. The PCM digital stereo sound is recorded/played back on the PCM track as an option.
With this unit, Hi-fi stereo sound can be recorded on the standard track.
To maintain compatibility with the conventional Hi-fi monaural equipment, the Hi-fi stereo sound is recorded as L – R sound using the 1.7 MHz carrier and L + R sound using the 1.5 MHz carrier as the FM audio signal.
To play back the tape recorded by its hi-fi stereo system, this unit uses a matrix circuit to produce the L and R stereo sounds separately. When conventional Hi-fi monaural equipment is used to play back a tape recorded in Hi-fi stereo, it will produce the L + R monaural sound because it can reproduce only the 1.5 MHz carrier.
The Hi-fi stereo system of this unit provides a live stereo sound atmosphere even when using the 8 mm video standard track.

This unit uses 8 mm video format cassettes. It records in the SP mode (approximately 1.43 cm/second) and the LP mode (approximately 0.72 cm/second) and can play back in the SP mode and LP mode. The quality of the playback picture in the LP mode, however, will not be as good as that in the SP mode.

Location of Parts and Controls

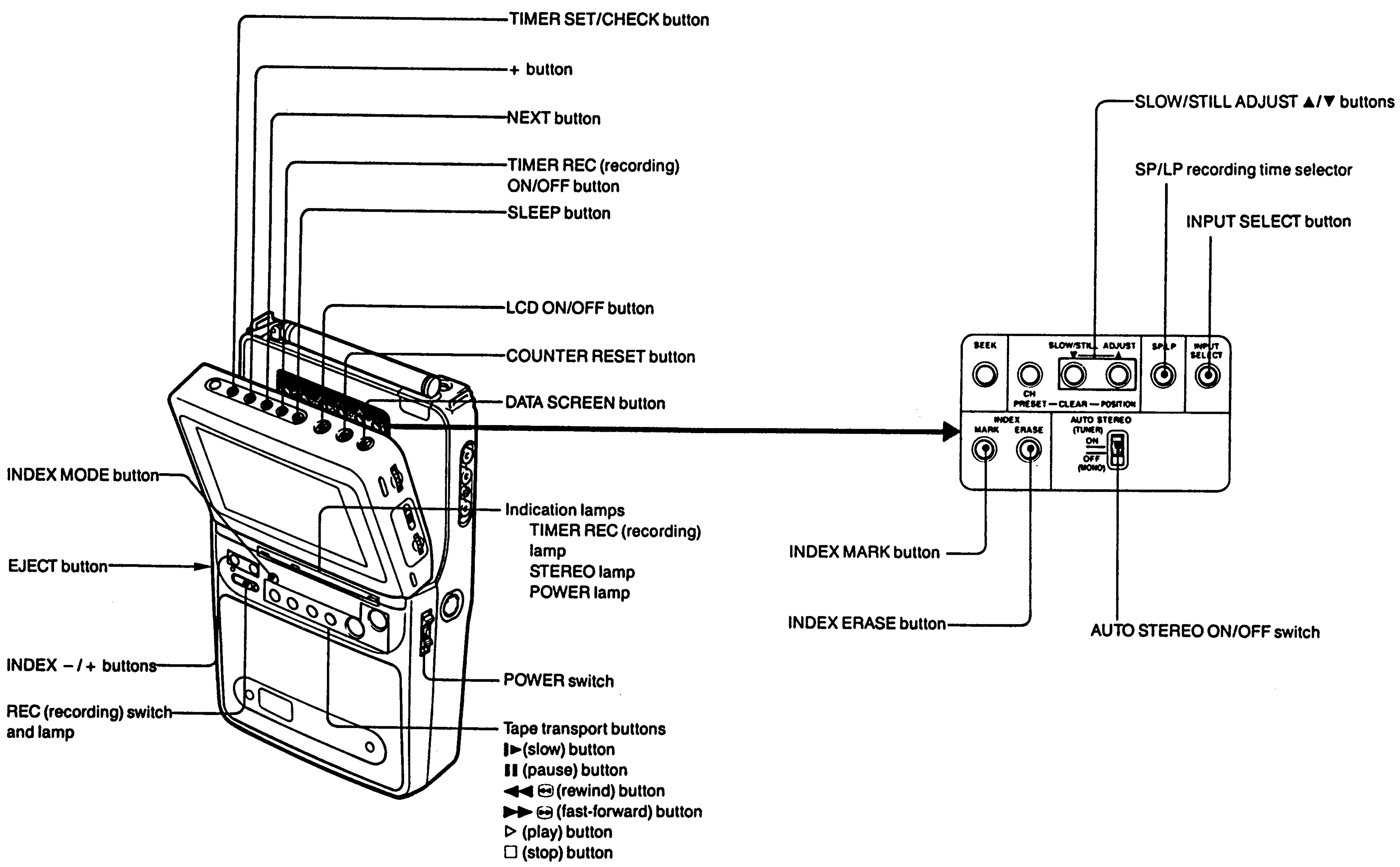
Parts used for watching TV programs


CLOCK SET button
+ button
NEXT button
SLEEP (sleep timer) button
Telescopic antenna
BATT (battery eject) knob
Battery mounting surface
DATA SCREEN button
LCD ON/OFF button
Indication lamps
STEREO lamp
POWER lamp
CHANNEL –/+ buttons

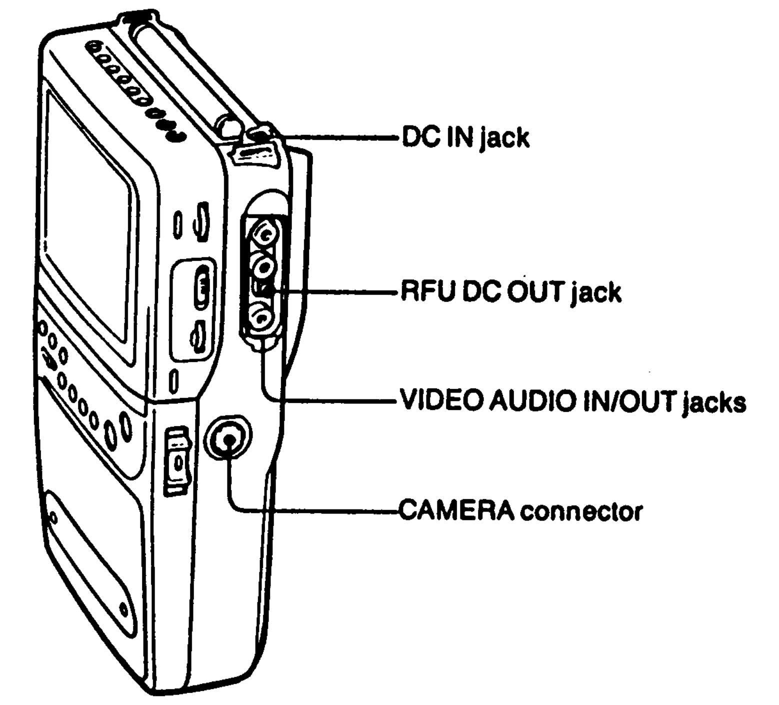

BRIGHT (brightness) control
COLOR control
MEGA BASS switch
HUE control
VOL (volume) control
POWER switch
INPUT SELECT button
Lithium battery compartment
CLEAR button
POSITION button
SEEK
SLOW STILL ADJUST
SP/LP
INPUT SELECT
ON
PRESET — CLEAR — POSITION
INDEX
MARK
ERASE
AUTO STEREO
(TUNER)
ON
OFF
(MONO)
SEEK button
CH PRESET button
AUTO STEREO ON/OFF switch

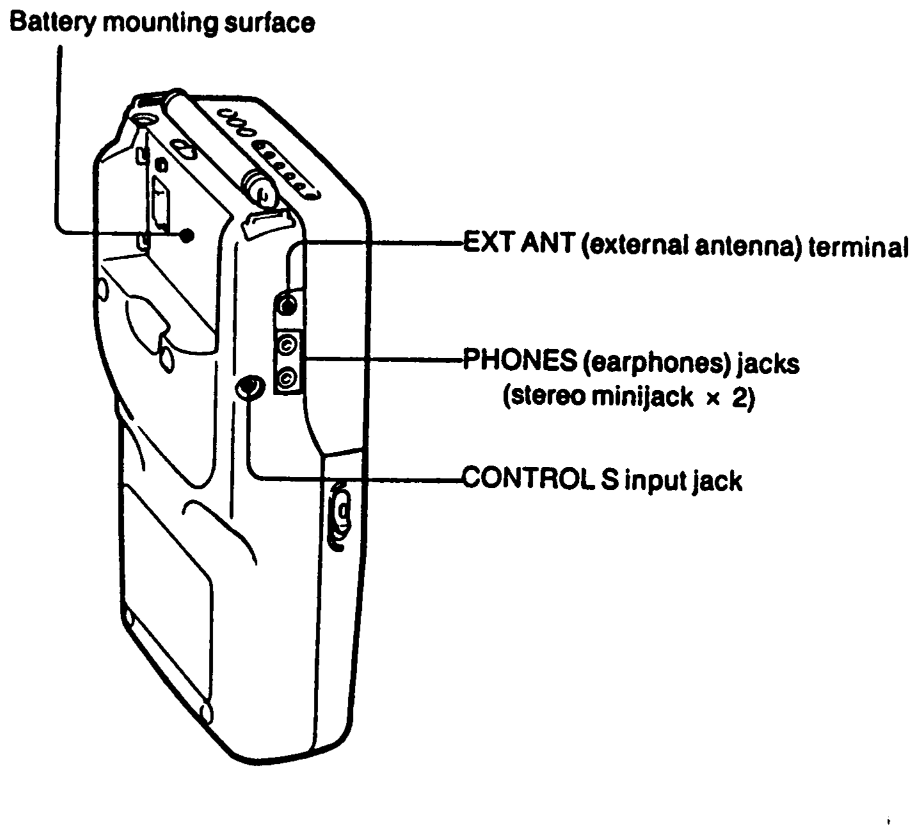
You can adjust the angle of the screen (max. 60°).

Parts used for VCR playback/recording


TIMER SET/CHECK button
+ button
NEXT button
TIMER REC (recording) ON/OFF button
SLEEP button
LCD ON/OFF button
COUNTER RESET button
DATA SCREEN button
INDEX MODE button
EJECT button
Indication lamps
TIMER REC (recording) lamp
STEREO lamp
POWER lamp
INDEX –/+ buttons
REC (recording) switch and lamp
POWER switch
Tape transport buttons
I► (slow) button
II (pause) button
◄◄ (rewind) button
►► (fast-forward) button
▷ (play) button
□ (stop) button
SLOW/STILL ADJUST ▲/▼ buttons
SP/LP recording time selector
INPUT SELECT button
SEEK
SLOW/STILL ADJUST
SP/LP
INPUT SELECT
CH
PRESET — CLEAR — POSITION
INDEX
MARK
ERASE
AUTO STEREO (TUNER)
ON
OFF (MONO)
INDEX MARK button
INDEX ERASE button
AUTO STEREO ON/OFF switch

Parts used for connection

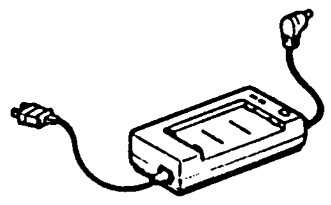
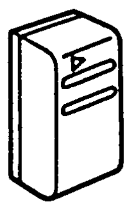
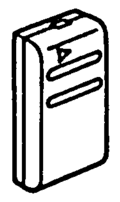
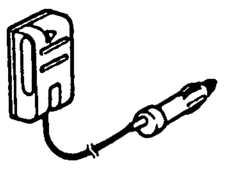
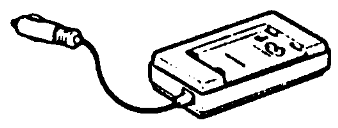

DC IN jack
RFU DC OUT jack
VIDEO AUDIO IN/OUT jacks
CAMERA connector


Battery mounting surface
EXT ANT (external antenna) terminal
PHONES (earphones) jacks
(stereo minijack × 2)
CONTROL S input jack

Getting Ready

Power Sources

Selection of Power Sources

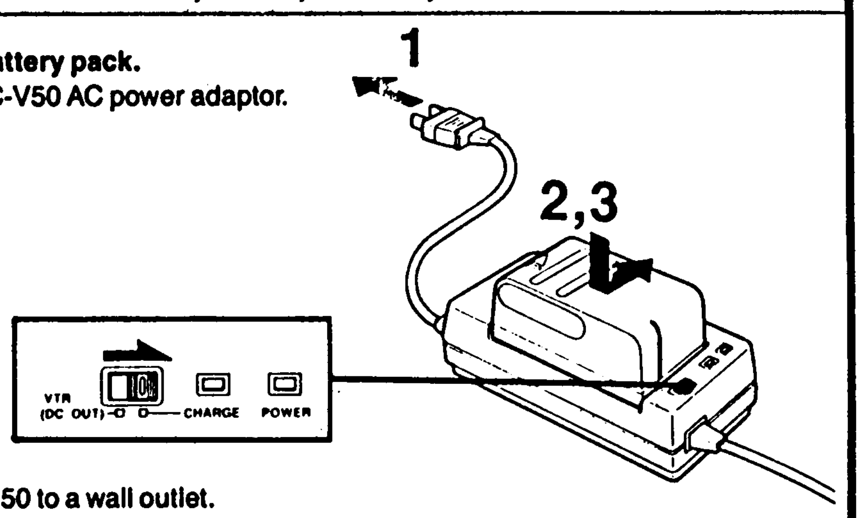
Place	Power sources	Page
Indoors	AC power adaptor AC-V50 (supplied) 	16
Outdoors	Battery pack NP-77 (supplied), NP-66H, or NP-77H  NP-55 	12
In the car	DC pack DCP-77  Car battery charger DC-V30 	17

The above accessories, except for the AC-V50 and NP-77, are not supplied.

Disconnecting the power source during recording or playback operations may damage the cassette tape. If this is done accidentally, supply the power again immediately and turn the power on.

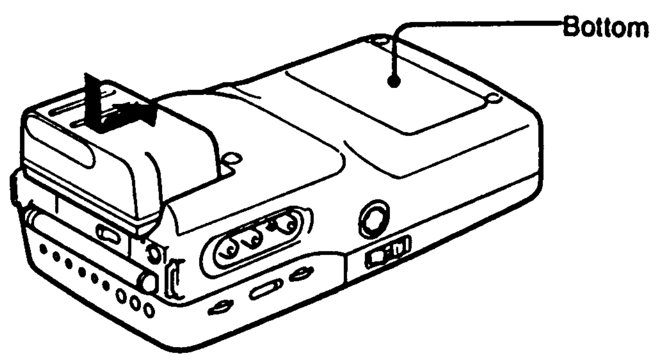
Using with Battery Pack — NP-77, NP-55, NP-66H, or NP-77H

1 First, charge the battery pack.
Use the supplied AC-V50 AC power adaptor.



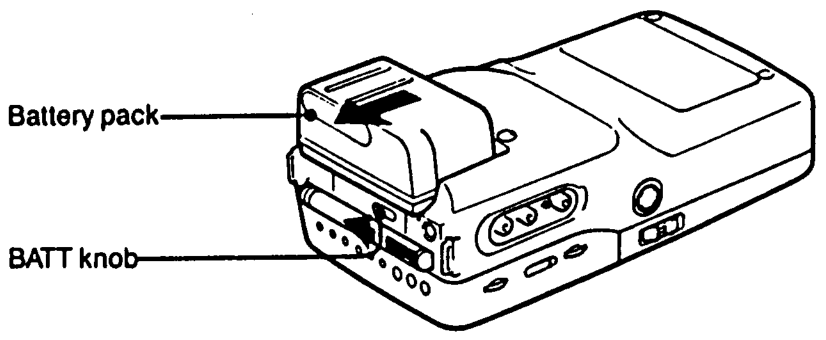
1 Connect the AC-V50 to a wall outlet.
2 Install the battery pack.
Align the right side of the battery pack with the line on the AC power adaptor.
3 While pressing the battery pack, slide it in the direction of the arrow.
The POWER lamp (green) and the CHARGE lamp (orange) on the AC-V50 lights up.
The charging begins.
When the charging is completed, the CHARGE lamp goes out.
Unplug the unit from the wall outlet and the POWER lamp goes out.

2 Attach the battery pack to the video TV recorder.
Align the battery pack with the white line on the video TV recorder, then while pressing, slide the battery pack in the direction of the arrow.



- The charging time is about 120 minutes for an NP-77, 140 minutes for NP-77H, 100 minutes for NP-66H, and 60 minutes for an NP-55.
- The unit cannot be operated with the AC power adaptor when it is used for charging a battery pack, and the battery pack cannot be charged when the AC power adaptor is used to operate the unit.
- An NP-77, NP-55, NP-66H, or NP-77H can also be charged with the BC-55 or BC-77 battery charger.

To remove the battery pack



While sliding the BATT knob in the direction of the arrow, slide the battery pack as illustrated.

Operating time

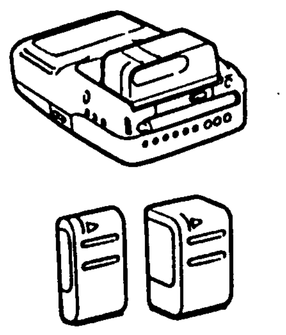
A fully-charged battery pack can operate this unit as follows:

	LCD ON/OFF	NP-77H	NP-77	NP-66H	NP-55
Watching TV programs	ON	Approx. 125 min.	Approx. 100 min.	Approx. 90 min.	Approx. 50 min.
VCR playing back	ON	Approx. 120 min.	Approx. 100 min.	Approx. 90 min.	Approx. 50 min.
TV program recording	ON	Approx. 95 min.	Approx. 75 min.	Approx. 70 min.	Approx. 40 min.
TV program recording	OFF	Approx. 140 min.	Approx. 115 min.	Approx. 105 min.	Approx. 55 min.
Camera recording*	OFF	Approx. 100 min.	Approx. 80 min.	Approx. 75 min.	Approx. 40 min.

* When connecting the color video camera CCD-G1 (not supplied) and setting the LCD ON/OFF switch to OFF.

Using the Battery Pack Efficiently

How to prepare the rechargeable battery packs

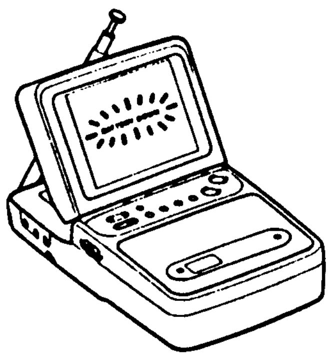


Have sufficient battery pack power to perform 2 or 3 times the amount of recording that you plan to do.
"Battery life" as indicated in the instruction manual or catalogue of the video TV recorder is measured by the continuous use of the video TV recorder, at room temperature, using a fully charged battery.
Fast winding or rewinding tape operations consumes much more battery power than normal tape transport operation. Consequently, battery life becomes shorter when these operations are performed frequently.

Battery life is shorter in a cold climate.
Cold climates reduce the efficiency of a battery and cause it to run out more quickly.

When to replace the rechargeable battery pack

When the battery pack is exhausted, the POWER lamp and the BATTERY DOWN indication on the screen starts blinking slowly about five minutes before the battery pack is discharged.
Replace the battery when the blinking changes from slow to fast. However, during playback, the BATTERY DOWN indication starts blinking rapidly about a minute before the battery pack is discharged.
Turn off the power of the video TV recorder before replacing the battery. While replacing the battery, keep the cassette inside the cassette holder. When the battery has been replaced, recording can be resumed smoothly without any picture distortion.


Fast blinking

Notes on battery exhaustion when a camera is connected
When the battery is exhausted, the tally lamp (red) displayed in the viewfinder of the camera starts blinking, and the power goes off automatically. Replace the battery pack with a fully charged one when the blinking starts.

Notes on charging

Before using the battery pack, charge it sufficiently. A brand-new battery pack is not charged.
Recharge the battery pack when it is fully exhausted.
- If the operation is completed before the BATTERY DOWN indication on the screen or POWER lamp starts blinking, it is recommended that you discharge the battery pack by playing back a tape until BATTERY DOWN or POWER lamp starts blinking rapidly.
- Do not recharge the battery pack before it has been discharged completely. Repeated charging while some capacity remains will reduce the battery capacity. However, the original battery capacity can be recovered if you fully discharge and fully charge the battery pack again.

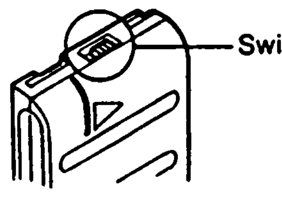
Keep the terminals clean

If the terminals (metal parts on the back) are soiled, the battery life will become shorter. When the terminals are soiled, or when the battery pack has not been used for a long time, repeatedly attach and remove it several times. This will improve the contact of the battery pack and the video TV recorder. Also, wipe the + and − terminals with a soft cloth or paper.

Notes on the rechargeable battery pack

Battery pack care
- Remove the battery pack from the video TV recorder after use, and keep it in a cool place. When the battery pack is installed on a video TV recorder, a small amount of current flows to the recorder even if the POWER switch is turned off. This causes overdischarge and, consequently, shortens the life of the battery.
- The battery pack is always discharging - even when it is not in use. Thus, the battery should be charged before each use.

How to use the switch on the battery pack
Use this switch as a reminder of the charging condition. Set the switch to the "no mark" position when the charging is completed. Set the switch to the "red mark" position when the battery has been discharged.



How many times can the battery pack be recharged
It can be fully charged and discharged about 500 times under normal temperatures. If the BATTERY DOWN indication blinks rapidly just after turning on the recorder, even though a fully charged battery pack has been installed, replace the battery pack with a brand new one.

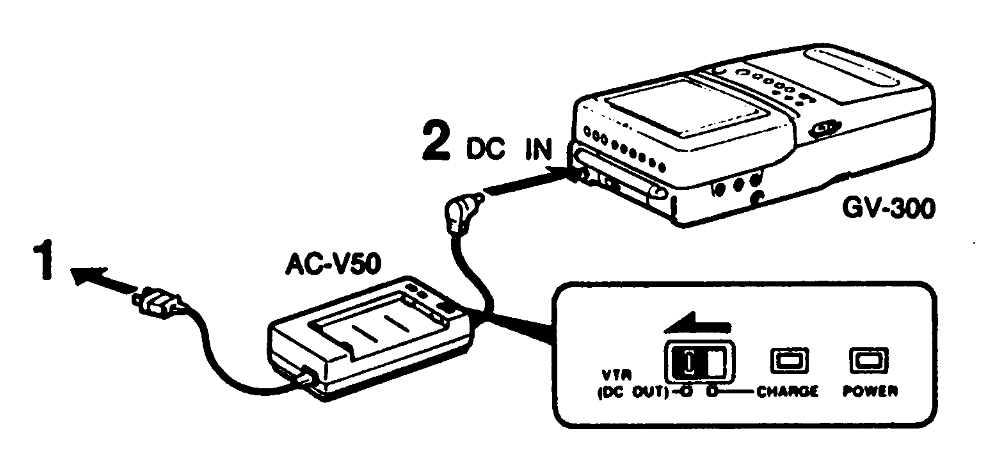
Charging temperature
Lower temperatures require a longer charging time.
Charging under a temperature ranging from 10°C to 30°C (50°F to 86°F) is recommended.

Why the battery pack heats up
While the battery pack is being charged or used, a chemical change occurs inside the battery pack which generates electric energy. Consequently, the battery pack becomes warm, but this is not dangerous.

Carrying the battery pack
If the + and − terminals are short-circuited with a piece of metal, the battery heat up abnormally. This is very dangerous. Never put an uncovered battery pack in a pocket together with a key holder or other metal object.

If the battery pack is not used for a long time (about 1 year)
Charge it again, but in this case the battery life will be shorter than normal. After several charging and discharging cycles, the battery life will recover its original capacity.

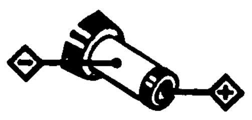
Using this unit with the AC Power Adaptor — AC-V50



1 **Connect the AC power adaptor to a wall outlet.**

2 **Insert the DC plug of the adaptor to the DC input jack of the video TV recorder.**

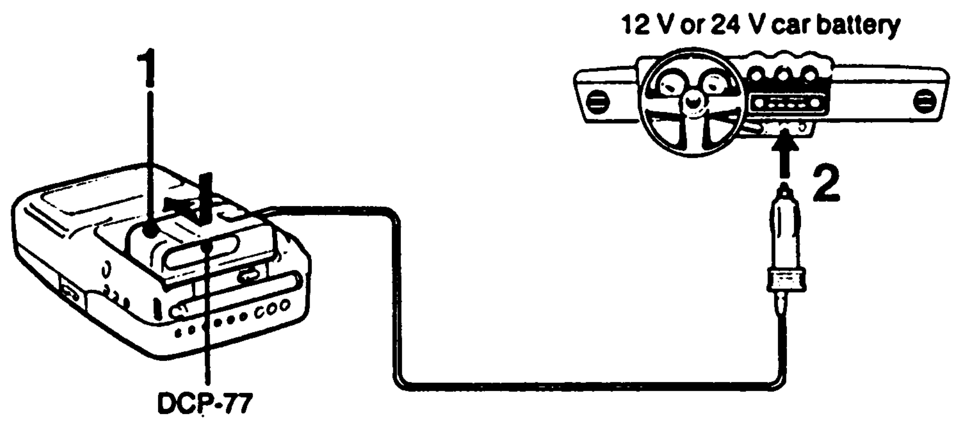
Note on the AC power adaptor
Use only the supplied AC-V50 AC power adaptor.
Do not use any other AC power adaptor.



Polarity of the plug

- **The unit is not disconnected from the AC power source as long as it is connected to the wall outlet.**
- **One blade of the plug is wider than the other for the purpose of safety and will fit into the wall outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.**
- **While the unit is in use, particularly during charging, keep it away from AM receivers and video equipment because it will disturb AM reception and video operation.**

Using This Unit with a Car Battery — DCP-77



1 **Attach the DC pack to the video TV recorder.**

2 **Connect the plug to the cigarette lighter socket.**

- Connect the DCP-77 only to a car with a negative ground car batteries of 12 V or 24 V.
- Attach or remove the DC pack in the same way as the battery pack.
- DCP-55 is not recommended for this unit because the capacity of the DCP-55 is not enough to operate it.

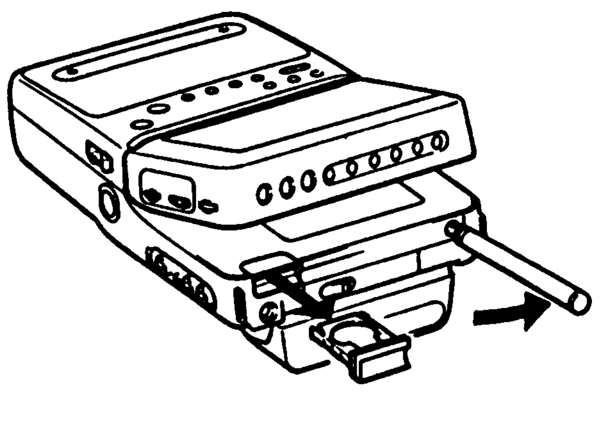
Notes
- Be careful not to let any metal object touch the metal projection on the battery pack. When the battery pack is not used, keep it in its case.
- Keep the video TV recorder away from the power source. If not, noise may appear on the screen.

Notes on using this unit in a car
- For your safety, do not watch the TV or operate the controls while driving.
- Avoid leaving the unit in a place with very high temperatures. If you do, it may cause distortion of the cabinet or malfunction of the unit.
- If you use this unit while your car is not in use, the car battery will be consumed. Avoid using this unit in such condition for more than 12 hours.

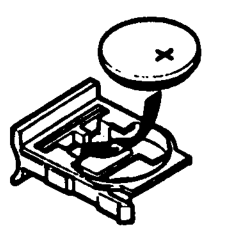
Setting the Clock

Before you set the clock, install a lithium battery. With a lithium battery installed, this unit powers the clock and keeps the last channel in memory when the power source is disconnected.

1 **Pull out the lithium battery compartment.**

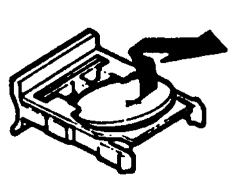


2 **Install the supplied CR2032 lithium battery with the + side facing out.**



3 **Reinsert the compartment.**

To remove the lithium battery
Press the battery upward and remove it as illustrated.



Lithium battery life

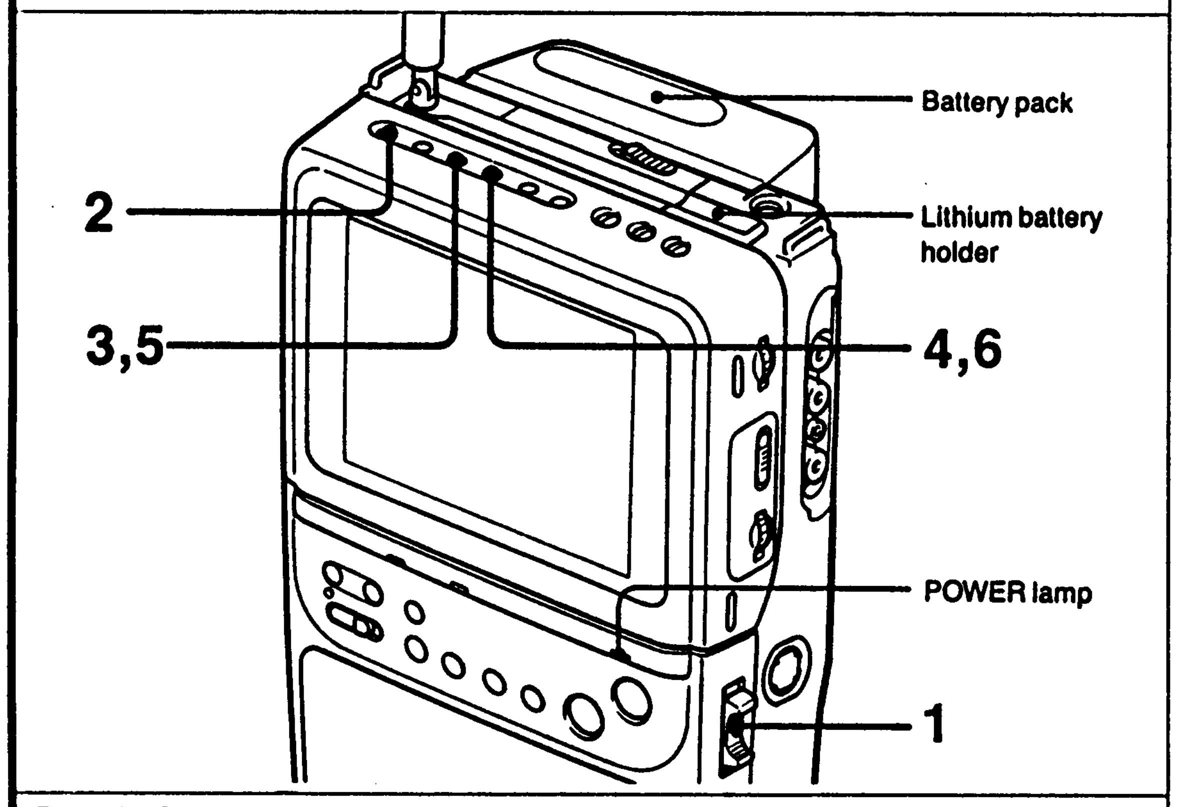
Approximately 1 year in normal operation.
If the lithium battery becomes weak, the AM 12:00 indication appears on the screen when the DATA SCREEN button is pressed. In this case, replace the battery with a Sony CR2032 lithium battery. Use of a battery other than a Sony CR2032 may present a risk of fire or explosion.
After replacing the battery, reset the clock.

Notes on lithium battery
- Keep the lithium battery out of the reach of children.
  Should the battery be swallowed, consult a doctor immediately.
- Before use, wipe the battery with a dry cloth to assure a good contact.
- Be sure to observe the correct polarity when installing the battery.
- Do not hold the battery with metallic tweezers, otherwise a short-circuit may occur.
- Do not break up the battery or throw it into a fire because it may explode. Carefully dispose of the used batteries.

Warning
Battery may explode if mistreated. Do not recharge, disassemble or dispose of in fire.

Setting the Clock

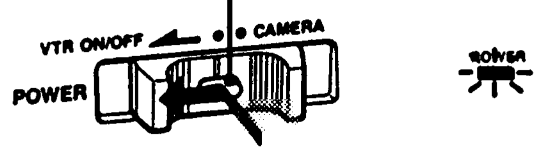
Before setting
- Make sure that the power source is connected correctly.
- The time indication "PM 12:00" means noon, and "AM 12:00" means midnight.


Battery pack
Lithium battery holder
2
3,5
4,6
POWER lamp
1

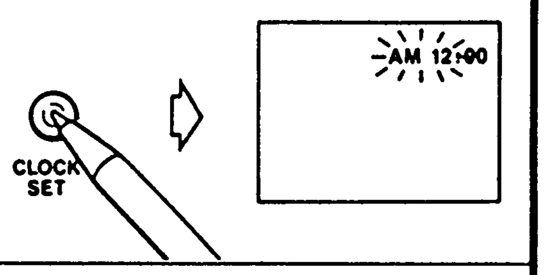
Example: Set to PM 1:15

1 **Turn the power on.**
The POWER lamp lights up.

While pressing the green button, slide the POWER switch to the left to turn the power on.

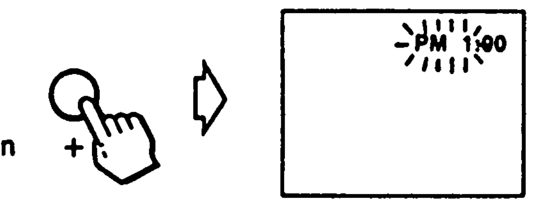

VTR ON/OFF
CAMERA
POWER
POWER

2 **Press the CLOCK SET button with a pen or similar object.**
The screen will enter the time setting mode.
The screen becomes dark.
The next item to be set blinks.

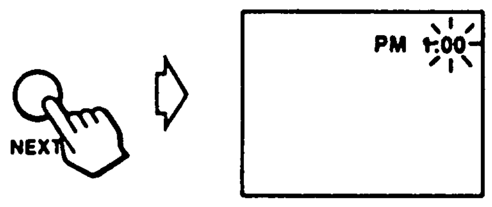

CLOCK SET
AM 12:00

3 **Set the hour.**
Press the + button repeatedly until you get the desired setting.

If you keep the button pressed, the indication will advance continuously.

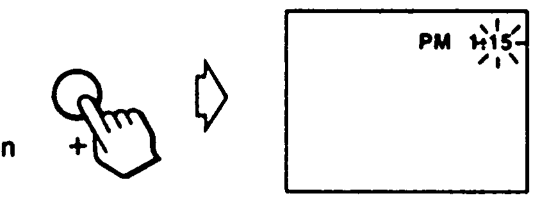


4 **Press the NEXT button.**

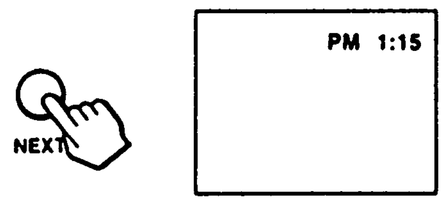


5 **Set the minute.**
Press repeatedly until you get the desired setting.

If you keep the button pressed, the indication will advance continuously.



6 **Press the NEXT button.**
The clock starts.
The screen goes back to the normal brightness.



Note
If the lithium battery is not installed, the clock will go back to "AM 12:00" each time the power source is disconnected.

Presetting TV Channels

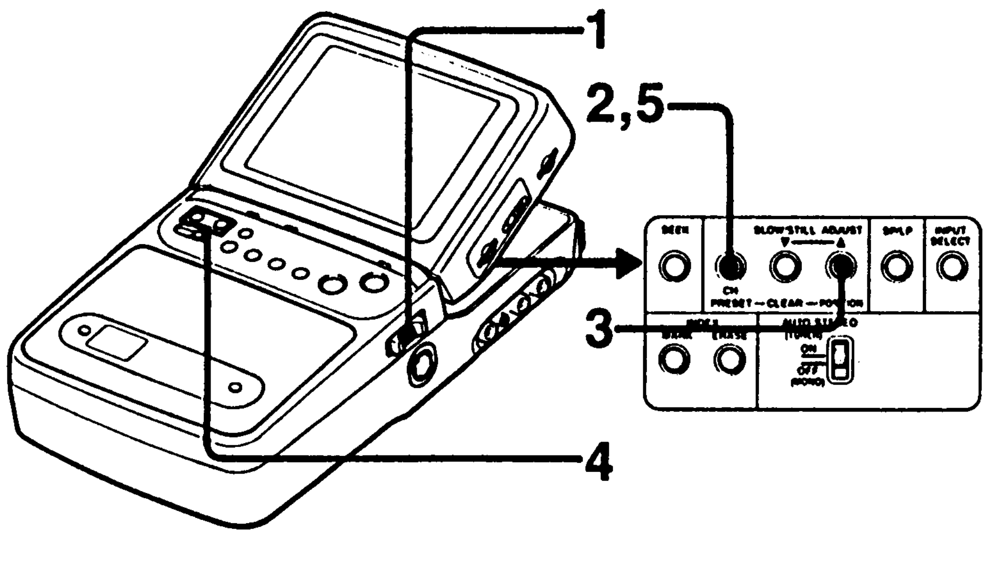
Your receiver is capable of receiving VHF channels 2-13, UHF channels 14-69 and cable TV channels 1 (A-8), 98 (A-2), 99 (A-1), 14-36 (A to W), 66-125 (W + 30 to W + 84). The channel numbers 1-99 will be displayed in the display window.
This unit is preset at the factory to receive certain channels (see the chart on page 23.) If you want to receive other channels, you need to preset them.

Preset channels

Program position	1	2-13	14-36	37-42	43	44-68	69	70-97	98	99
Corresponding channel	CATV 1	VHF 2-13	CATV 14-36	—	*	—	*	—	CATV 98	CATV 99
Number displayed	1	2-13	14-36	37-42	43	44-68	69	70-97	98	99

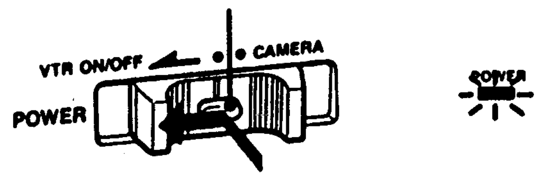
* UHF channels are preset around this number.

To Preset New Channels

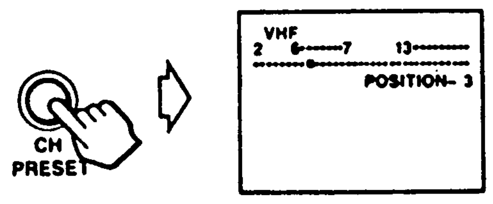

1
2,5
3
4
CH PRESET
CLEAR

1 **Turn the power on.**
The POWER lamp lights up.
If the TV program is not displayed, press the INPUT SELECT button

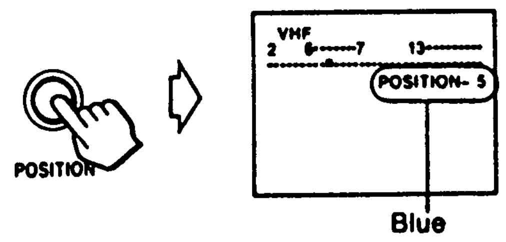
While pressing the green button, slide the POWER switch to the left.


VTR ON/OFF
CAMERA
POWER
POWER

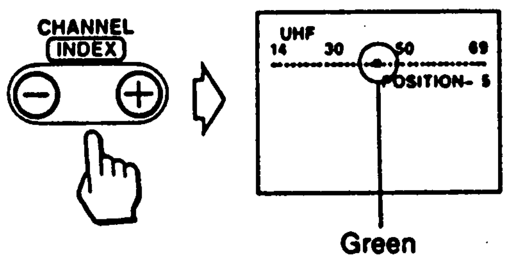
2 **Press the CH PRESET button.**


CH PRESET
VHF
2
7
13
POSITION- 3

3 **Press the POSITION button to select the desired program position where the channel is to be stored.**

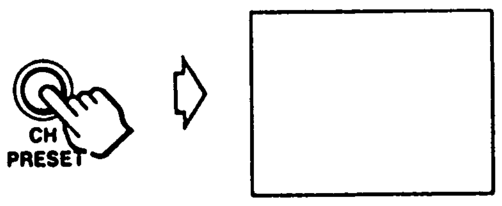

POSITION
VHF
2
7
13
POSITION- 5
Blue

4 **Press the CHANNEL −/+ buttons repeatedly to select the channel to be stored.**
The UHF channel range is displayed after the VHF range*.
Repeat steps 3 and 4 for other channels to be preset.


CHANNEL
INDEX
UHF
14
30
50
69
POSITION- 5
Green

5 **Press the CH PRESET button.**
Channel presetting is completed.

The on-screen display disappears.

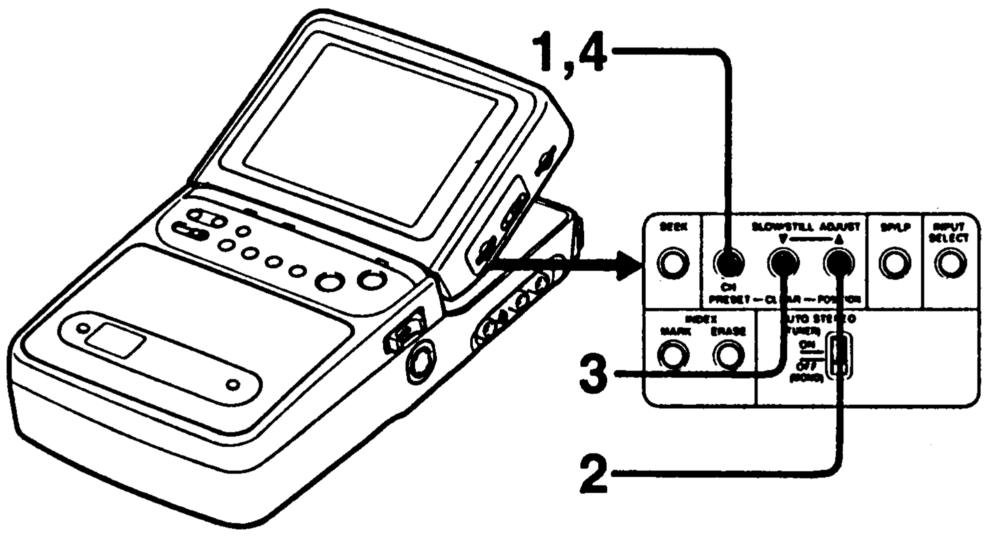


* After the channel range is displayed, wait for about 2 seconds before next operation.

To change the order of the channel to be stored
Follow the above steps.

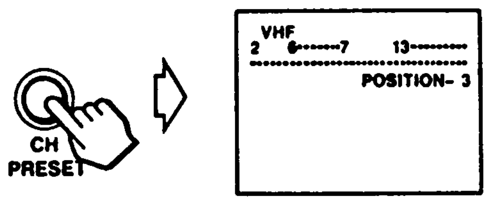
To Erase Channels

The erased program position is skipped when you press the CHANNEL + / – button.

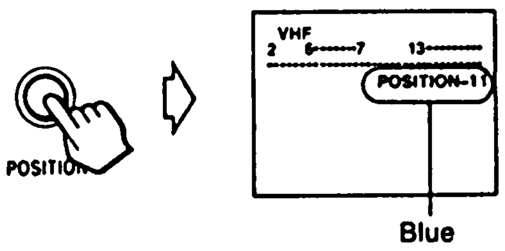

1,4
3
2
SEEK
SLOW/STILL ADJUST
CH PRESET – CLEAR – POSITION
SP/LP
INPUT SELECT
INDEX
MARK
ERASE
AUTO STEREO (TUNER)
ON
OFF (MONO)

Example: To erase program position 11

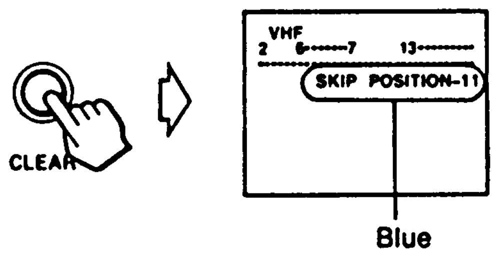
1 **Press the CH PRESET button.**


CH PRESET
VHF
2 6——7 13——
POSITION- 3

2 **Press the POSITION button and select the program position to be erased.**

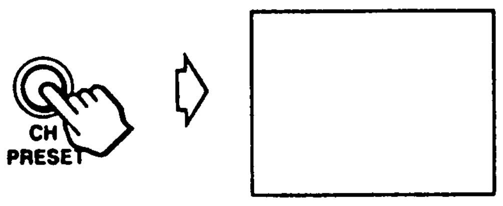

POSITION
VHF
2 6——7 13——
POSITION-11
Blue

3 **Press the CLEAR button.**
The SKIP indication appears.


CLEAR
VHF
2 6——7 13——
SKIP POSITION-11
Blue

Repeat steps 2 and 3 for other program position to be erased.

4 **Press the CH PRESET button.**
The on-screen display disappears.



To add the erased channels again
See "To Preset New Channels" on page 22.

Channel Allocation Chart

Frequency (MHz)	50	100	150	200	250	300	400	500	600	700	800
VHF/UHF channels	VHF 2-6			VHF 7-13				UHF14-69			
CATV channels	A-8~A-6	A-2~I		J~W				W+30~W+84			
Band indicator	VHF							UHF			

When the CHANNEL + button is pressed, the above channels will be scanned from the lowest frequency to the highest in sequence. By pressing the CHANNEL – button, the channels will be scanned in reverse.

Cable TV Channel Chart *

Cable TV systems use letters or numbers to designate channels. To tune in a channel, refer to this chart.

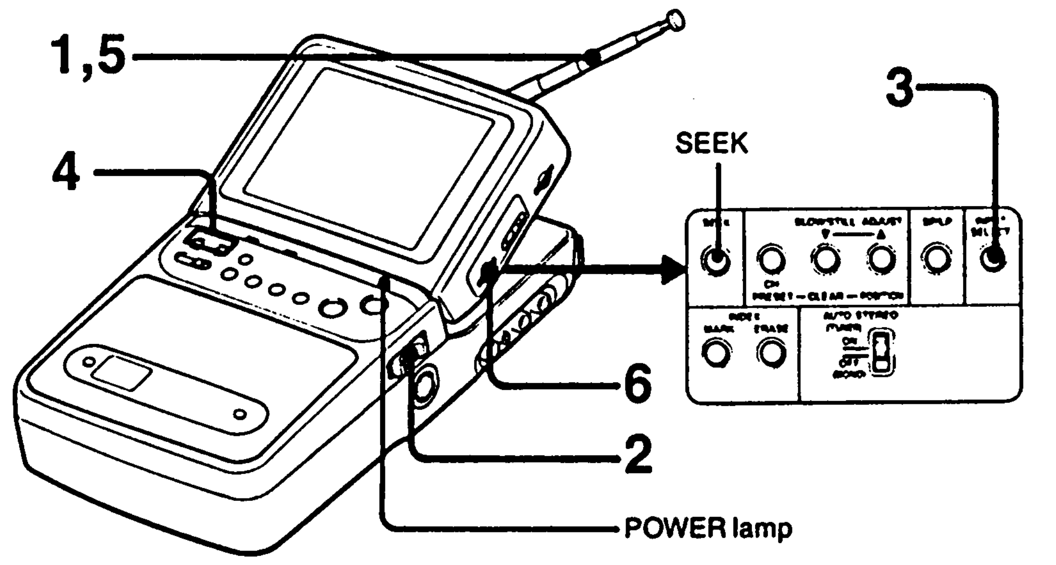
Number on this TV	1	98	99	14	15	16	17	18	19	20	21	22
Corresponding CATV channel	A-8	A-2	A-1	A	B	C	D	E	F	G	H	I

23	24	25	26	27	28	29	30	31	32	33	34	35	36	....
J	K	L	M	N	O	P	Q	R	S	T	U	V	W	W+30 ....W+84

Check with your local cable TV company for more complete information on the available channels.
* The designation of the cable TV channels conforms to the EIA/NCTA recommendation.

Note
Pay cable TV systems use scrambled or encoded signals and require special converters (decoders) besides the normal cable connections.

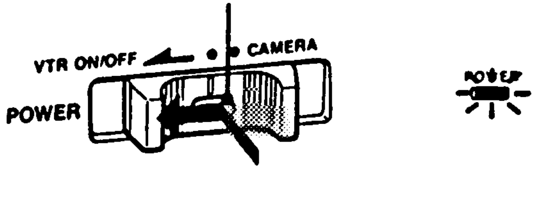
Watching TV Programs


1,5
4
3
SEEK
6
2
POWER lamp

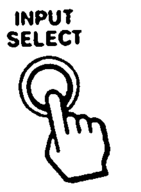
1 **Pull out the antenna fully.**
Be sure to pull at the base of the antenna.
If you have connected an external antenna or CATV cable, be sure to fold in the telescopic antenna.

2 **Turn the power on.**
The POWER lamp lights up.

While pressing the green button, slide the POWER switch to the left.


VTR ON/OFF
CAMERA
POWER

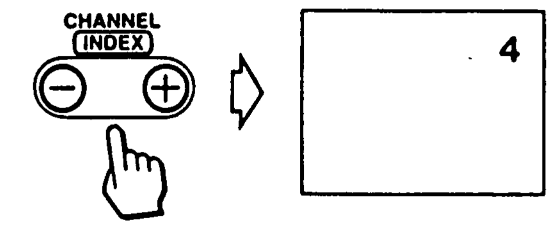
3 **If a TV program is not displayed, press the INPUT SELECT button.**


INPUT SELECT

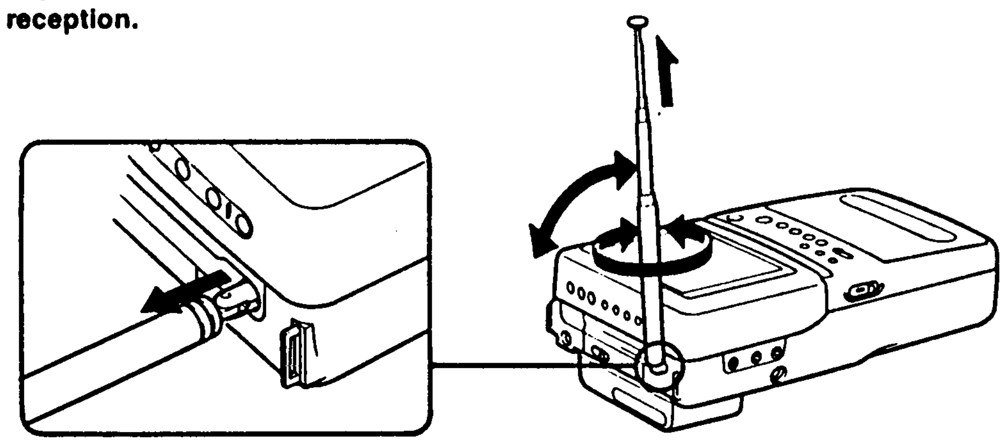
The display will change as follows:
TV program ——→ LINE
CAMERA

⇩ To be Continued

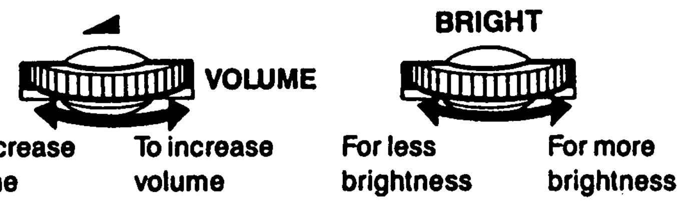
4 **Select the desired channel.**
Press + for higher-numbered channels and − for lower-numbered channels. The channels will appear in numerical sequence. Press CHANNEL +/− repeatedly until you get the desired channel on the screen.


CHANNEL
INDEX
4

5 **Adjust the antenna for the best reception.**

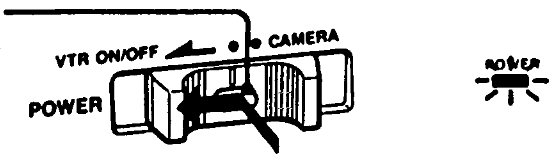


6 **Adjust the volume and brightness.**

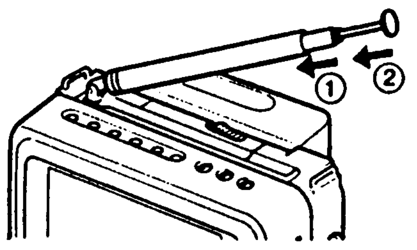

BRIGHT
VOLUME
To decrease volume
To increase volume
For less brightness
For more brightness

To turn off the TV

While pressing the green button, slide the POWER switch to the left. The POWER lamp goes out.


VTR ON/OFF
CAMERA
POWER
POWER

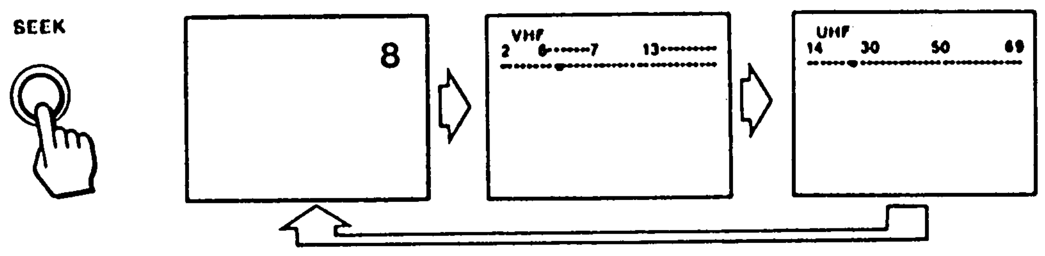
To put the antenna away
Slide in the base of the telescopic antenna first, then the center and the point.



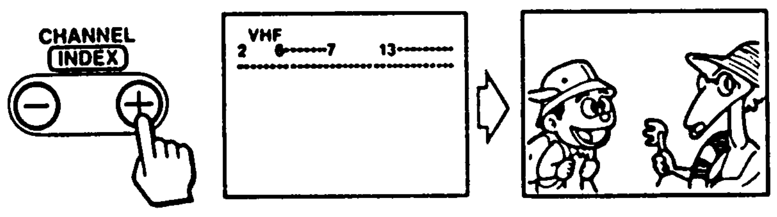
To View a TV Program Without Presetting Channels

When you do not know the channel number of the TV program you wish to view or if you want to use the unit in the moving car, search for the program as follows.

1 **Press the SEEK button.**
The channel range display appears.
For VHF channels, press once. For UHF channels, press twice.
To restore the normal display, press once more.


SEEK
8
VHF
2 7 13
UHF
14 30 50 69

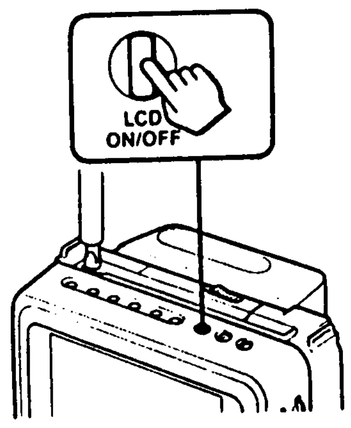
2 **Press the CHANNEL +/− buttons to select the channel.**


CHANNEL
INDEX
VHF
2 7 13

After selecting the channel, the channel range display goes out after a few seconds.

To mute (turn off) the picture

Press LCD ON/OFF button.
The screen will be muted.



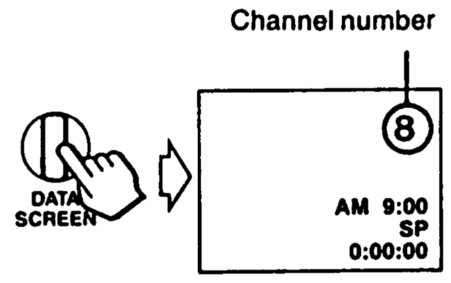
It is recommended to mute the picture when you view the playback picture with another TV or monitor. The picture noise of the TV or monitor is reduced. Battery life will also last longer if you use the unit with the picture turned off. To restore the picture on this unit, press LCD ON/OFF again.

Note
When no picture is displayed and the volume is low, or the earphones are connected, the unit appears to be turned off even though it is not. Be sure to turn off the unit with the POWER switch when it is not in use.

To display the channel number

Press the DATA SCREEN button.

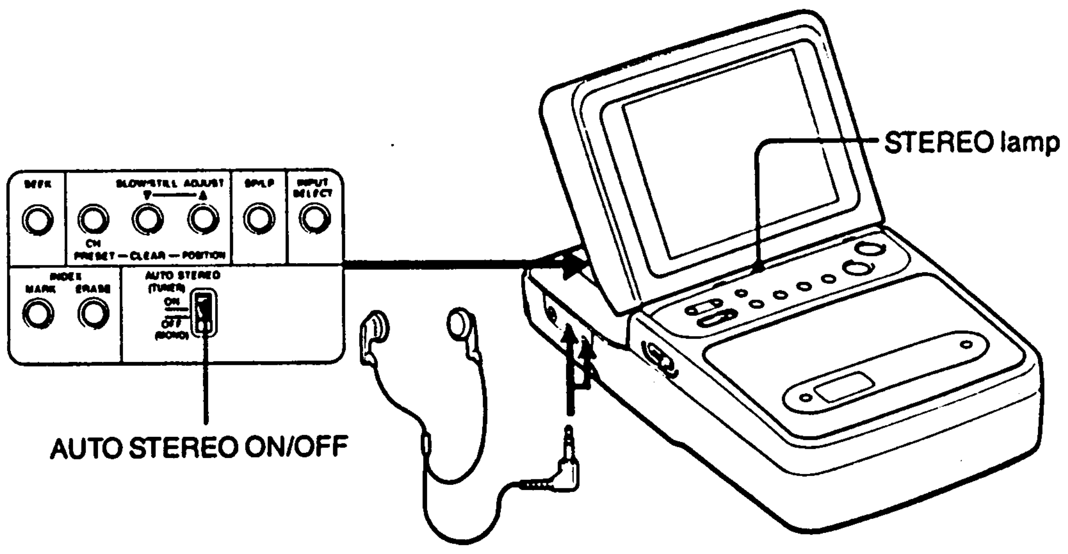
To make the on-screen display disappear, press the DATA SCREEN button again.
After the SEEK button is pressed, the VHF or UHF channel range is displayed instead of the channel number, then goes off after a few seconds.


Channel number
DATA SCREEN
8
AM 9:00
SP
0:00:00

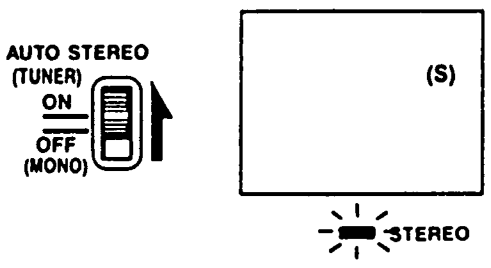
"Last channel" memory function
- While you are watching TV programs, if the power source is disconnected or the battery pack becomes exhausted, the unit turns off with the last channel being memorized.
  When you turn on the unit again, the last channel appears on the screen.
  The lithium battery must be installed for this function.
- The last channel memory function also works when the TV signal is cut off, for example, when you go through a tunnel in a moving car.
- If the lithium battery becomes exhausted but the power source is connected, the last channel memory function will still operate.

Listening to Stereo Programs

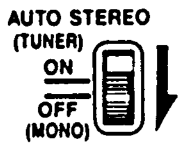
Connect the supplied stereo earphones to the PHONES jack to listen to the stereo sound.
The speaker of this unit is monaural.


STEREO lamp
AUTO STEREO ON/OFF

Normally set the AUTO STEREO ON/OFF switch to ON.
The STEREO lamp lights up automatically whenever a stereo program is received.


AUTO STEREO (TUNER)
ON
OFF (MONO)
(S)
STEREO

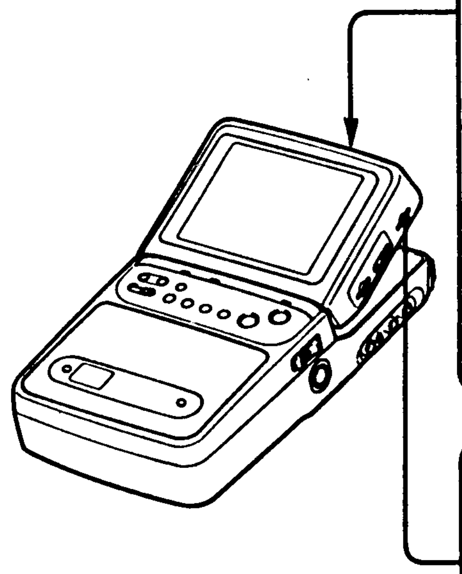
If excessive noise is heard when receiving a stereo program
Set the AUTO STEREO ON/OFF switch to OFF. The sound will be monaural, but the noise will be reduced. In this case, the STEREO lamp goes off. It is recommended to use monaural sound when using the unit in a moving car. To restore the stereo sound, set the switch to ON.

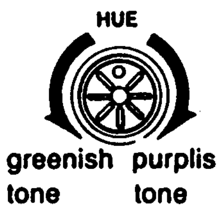

AUTO STEREO (TUNER)
ON
OFF (MONO)

Adjusting the Picture and Sound

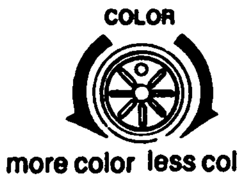
Adjust the picture and sound to your preference.

To adjust the picture



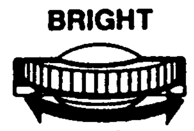


Adjust the skin tone. (Set to the center for standard level.)



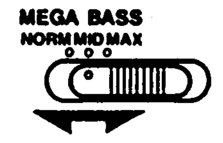
Adjust the color intensity. (Set to the center for standard level.)

Adjust the brightness.



To listen to the dynamic bass sound

MEGA BASS function
Used for listening to the sound with the stereo headphone.



Set to NORM, MID, or MAX.

Using the SLEEP Timer

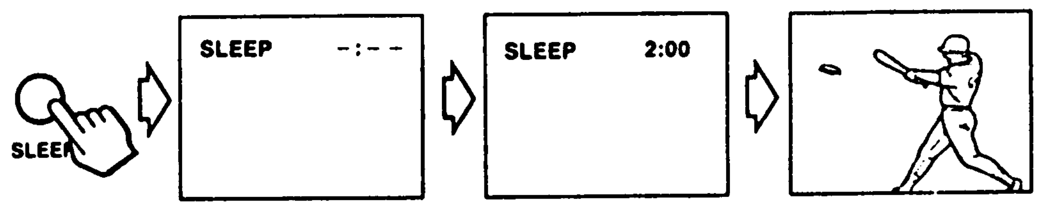
You can set the unit to turn off automatically after a certain amount of time, after as short as 30 minutes or as long as 5 hours, while viewing a TV program, video playback, or while recording.
Each time you press the SLEEP button, the display will change as follows:

-:-- → 0:30 → 1:00 → 1:30 → 2:00 → 2:30
↑ ↓
5:00 ← 4:30 ← 4:00 ← 3:30 ← 3:00

Example: To turn off the TV after 2 hours

1 Make sure the clock is set correctly (page 20).
No indication will appear on the screen if the clock is not set.

2 Select the desired time interval by pressing the SLEEP button.

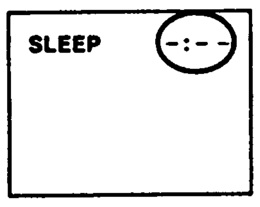


The screen becomes dark.
The normal display will be restored after a few seconds.

The TV will be turned off after 2 hours.
The procedure is the same for tape playback and recording. The tape will stop running after the selected time interval.

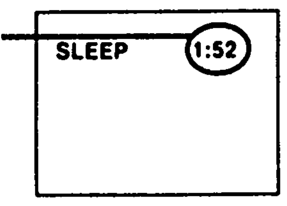
To cancel the SLEEP timer

Press the SLEEP button repeatedly until the "-:--" display appears. The SLEEP timer can also be canceled by turning off the unit with the POWER switch.



To check the remaining time

Press SLEEP once.
The remaining time is displayed.
The indication will go off after a few seconds.

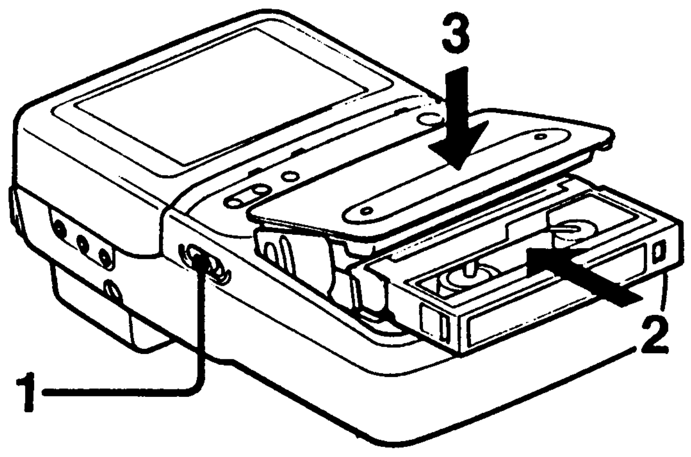


The unit will be turned off after about 1 hour and 52 minutes.

Note
When you use the unit with rechargeable batteries, the unit may turn off before the selected time because the batteries are exhausted.

Inserting a Cassette

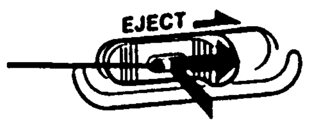
Make sure that the power source is connected to the unit.



To insert a cassette

1 Open the cassette holder with the EJECT button.

While pressing, slide the button to the right.



2 Insert the cassette with the window side facing up.

3 Close the cassette holder.

When you slide the EJECT button, power is supplied and the cassette holder opens even if the power is turned off. When the cassette holder opens, the power goes off automatically. Slide POWER if you want to continue operation.

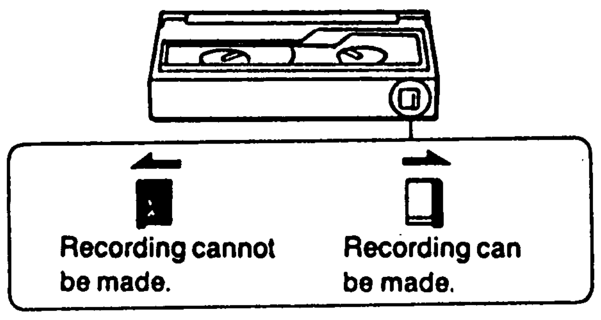
To eject a cassette

Slide the EJECT button. Make sure the tape is not running.

Note
Do not open the cassette holder while the unit is in the vertical position. If you do, the cassette may fall out of the holder and be damaged.

To Prevent Accidental Erasure

When a new recording is made on a previously recorded tape, the previous recording is automatically erased. To protect a recording, slide the red safety tab out to cover the opening.



Notes on opening and closing the cassette holder

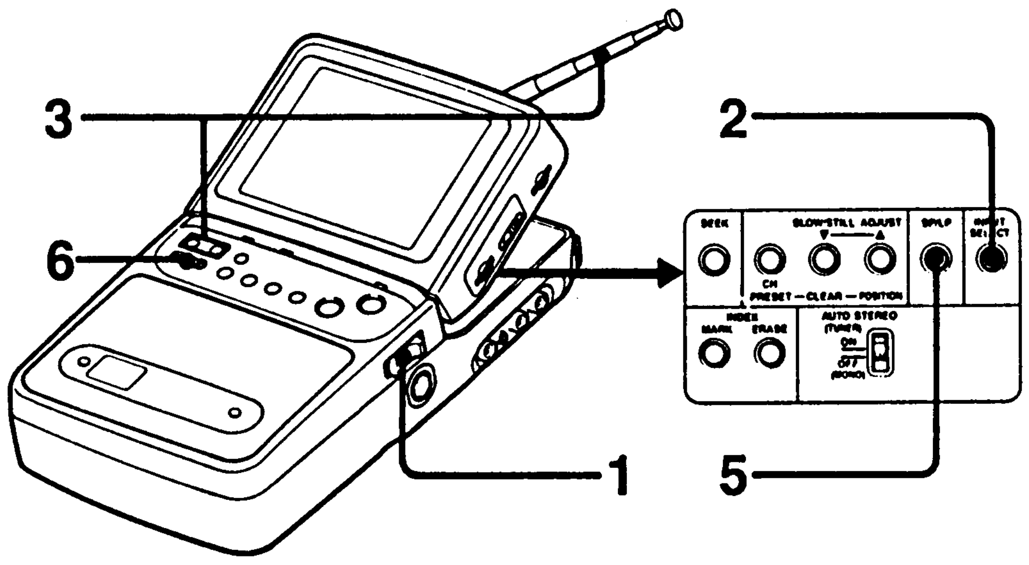
- Do not insert your finger into the cabinet when the cassette holder is open.
- Be careful not to get your finger caught in the cassette holder.

Notes on the cassette

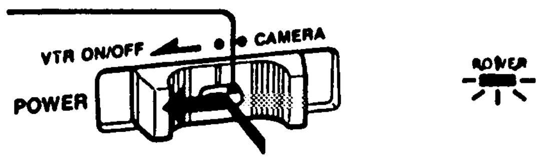
- Store cassettes in their cases when they are not being used and keep them in an upright position to prevent intrusion of dust and uneven winding.
- Always insert the cassette in the correct position.
- Never insert anything in the small holes on the rear of the cassette.
- Remove the cassette from the video TV recorder when not in use.

Recording TV Programs

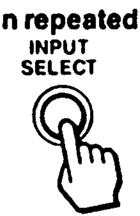
You can record a TV program while viewing it. For optimal picture and sound quality, connecting an external antenna is recommended. (See page 54.)



1 Turn the power on.
The POWER lamp lights up.
While pressing the green button, slide the POWER switch to the left.



2 If the TV program is not displayed, press INPUT SELECT button repeatedly until the TV program is displayed.
The display will change as follows:
TV program → LINE
↑ CAMERA ←



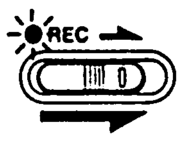
3 Select the desired TV channel. (See page 28.)
Adjust the telescopic antenna for the best reception. (See page 28.)

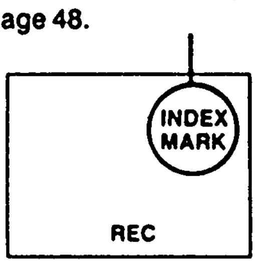
4 Insert the cassette. (See page 34.)

5 Select the recording mode, SP or LP.
The recording time of a cassette in the LP mode is twice as long as that in the SP mode. For better picture and sound quality, set to SP.

6 Slide the REC switch to the right.
Recording starts.

For this on-screen display, see page 48.





To stop recording for a moment
Press ❚❚.

To resume recording
Press ❚❚ again.
(If the PAUSE button is not pressed again for about 5 minutes, the pause mode will be released automatically and the unit will stop. This is to protect the video heads and recording will stop.)

To stop recording
Press ☐.

When the tape is recorded to the end
The tape stops automatically, but the unit is not turned off. Turn the power off with the POWER switch.

About the recorded sound
The VOL control setting has no effect on the recording level.

Changing the channel during recording

Set the unit in the recording pause mode and then select another channel. You cannot watch another program while recording.

When recording from the beginning of a tape

Run the video TV recorder for about 15 seconds at the beginning of a cassette before recording. This will prevent missing the starting point or having any previously recorded pictures appear when playing back on another video cassette recorder.

When recording starts

The starting point is marked on the tape automatically and "INDEX MARK" is displayed on the screen. The index mark helps you to find the point where recording begins on a tape.

Recording/playback time

Two tape speeds can be selected with the SP/LP selector.
The recording time in the LP mode is twice as long as that in the SP mode. For better picture and sound, recording in the SP mode is recommended. During playback, the mode in which the tape was recorded is selected automatically.

Cassette and their recording time

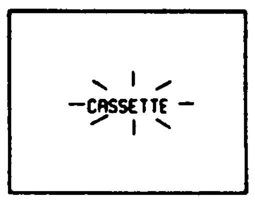
There are two formats for 8mm video recording, NTSC and PAL. Video cassette tapes are made to correspond to one of these formats. Use NTSC format cassette tapes for this unit. You will find "P6" on the package of NTSC cassettes.
In some countries, however, only PAL format cassette tapes with "P5" on the packages are available. If a PAL format cassette is used with this unit, the actual recording time may differ from the recording time indicated on the cassette.

Note
If you record with this unit on a tape that has been recorded in the PCM mode, and if you play back this tape on a VCR with PCM function, the sound may be cut off occasionally. In this case, set the audio monitor switch of the VCR to the standard position.

To stop recording automatically after a certain time — Quick timer

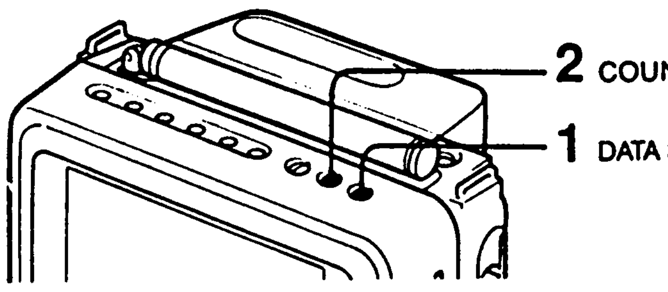
Press the SLEEP button during recording. You can leave the unit function when you go to bed or when you go out, etc.
The unit will be turned off automatically at the preset time. For operation, see page 33.

Are you having trouble?

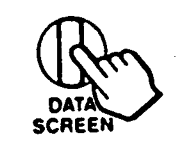
Symptom		Possible cause	Correction
"CASSETTE" indication is displayed when you slide the REC switch.		The safety tab on the cassette is slid out.	Slide the tab in or use a new cassette.
		The tape is at its end.	Rewind the tape or use a new cassette.
		No cassette is inserted.	Insert a cassette.

Using the Tape Counter

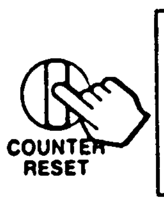
During recording or playback, the digits on the counter indicate the actual recording or playback time.
By noting the counter reading at a particular point, you can easily find that point later by referring to the tape counter.

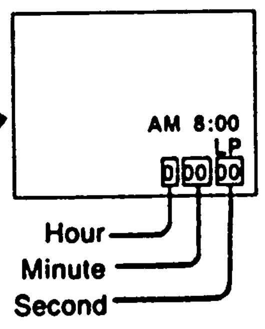


1 Press DATA SCREEN so that the counter is displayed.



2 During recording or playback, press COUNTER RESET at the point you later want to locate.
The counter will be set to 0:00:00.

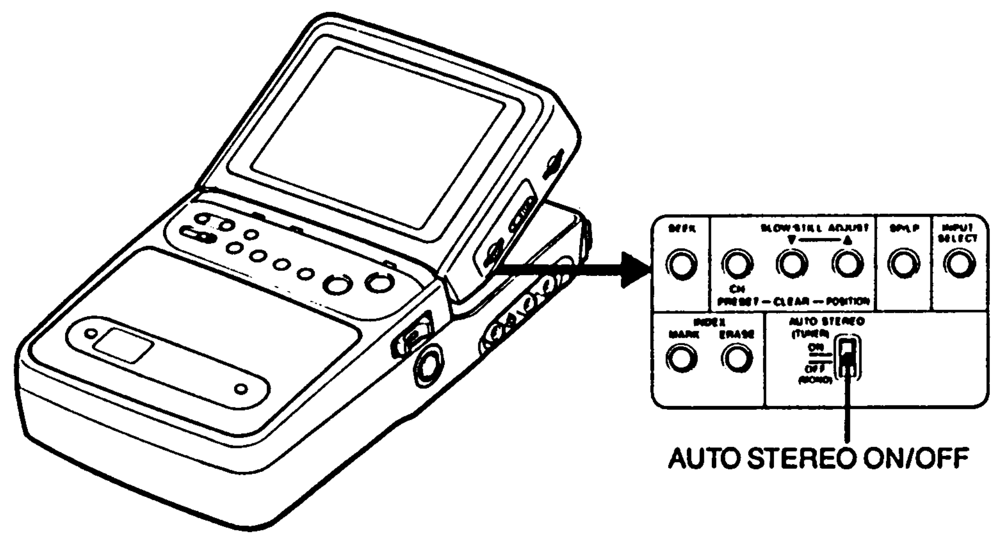




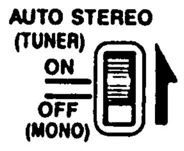
Use the counter to find this point later.
For your convenience, use both the counter and the index marks.

Notes
- The counter reading and the point on the tape may not correspond exactly. Use the counter as a guide.
- There will be a time lag of several seconds on the counter reading after repeated fast-forward and rewind operations.
- There will also be a time lag of several seconds when a tape recorded in both the LP or SP modes or a tape having a blank portion between the recorded portions is played back.

Recording Stereo Programs


AUTO STEREO ON/OFF

Set the AUTO STEREO ON/OFF switch to ON.


AUTO STEREO
(TUNER)
ON
OFF
(MONO)

A stereo program is recorded in stereo automatically.
A monaural program is recorded in monaural.

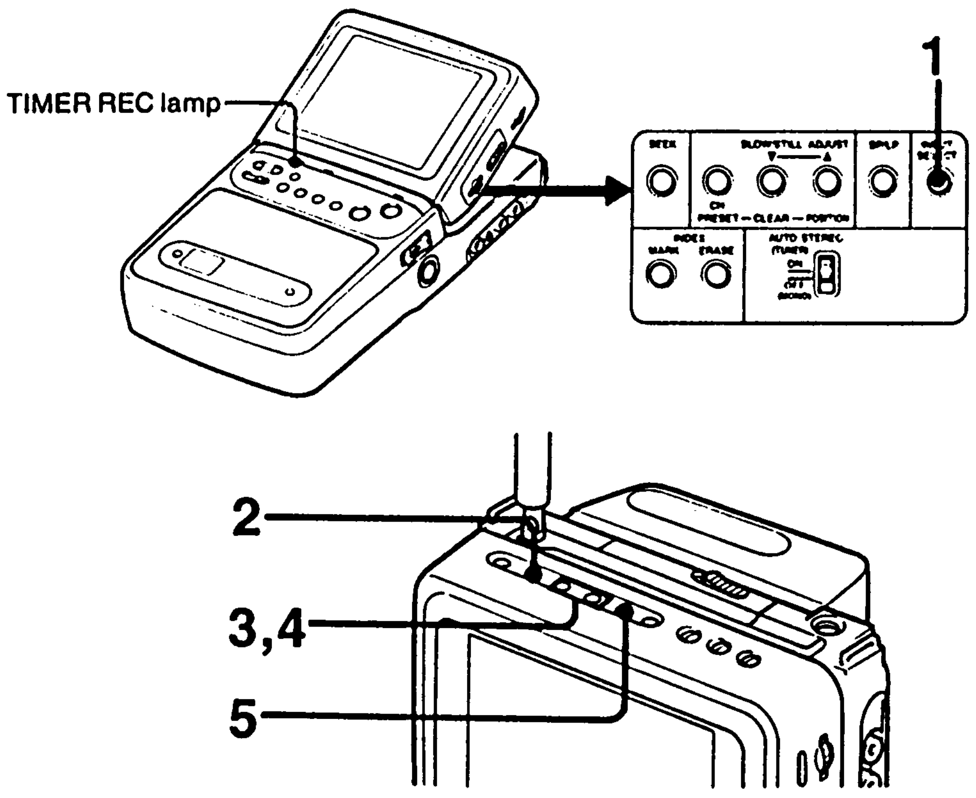
Using the Timer-Activated Recording Feature

By using the timer-activated recording feature, you can program this unit to automatically record a TV program that will be shown within 24 hours of activating the timer. For better recording of picture and sound, use of an external antenna is recommended. See page 54.

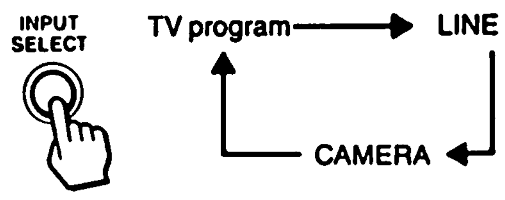
Before setting the timer

- Make sure that the power is supplied. (Is the battery pack fully charged? For long recording, use of the AC power source is recommended.)
- Set the clock (see page 20.)
- Insert a cassette (see page 34.) Make sure that the safety tab is slid in.
- Select the recording mode, SP or LP. For better quality picture, set to SP.
- If recording a stereo program, set the AUTO STEREO ON/OFF switch to ON.

Example: To record the program from 8:30 pm to 9:45 pm.

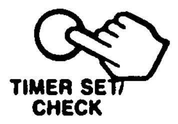

TIMER REC lamp
1
2
3,4
5

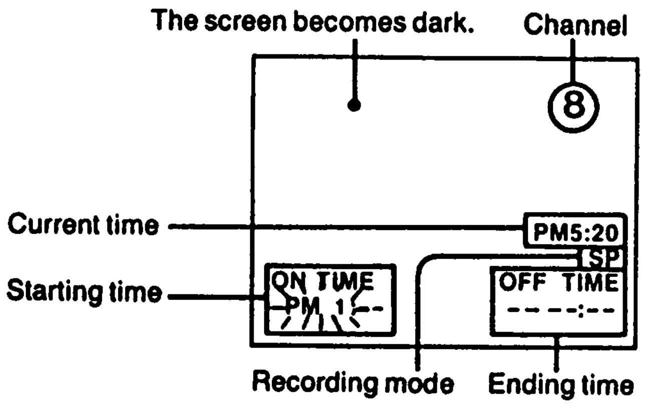
1 **Press the INPUT SELECT button repeatedly to select the recording source.**
For TV program recording, select the desired channel.
The input source will be changed as follows:


INPUT SELECT
TV program
LINE
CAMERA

⇩ To be Continued

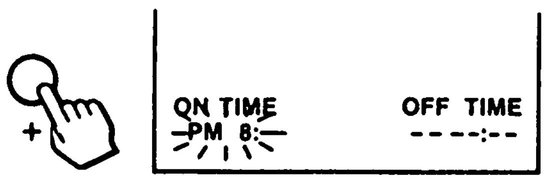
2 **Press the TIMER SET/CHECK button.**


TIMER SET/CHECK

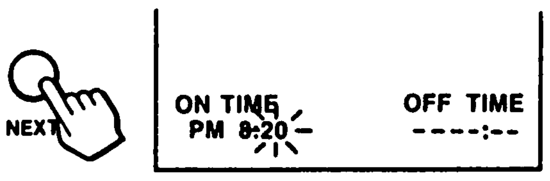

The screen becomes dark.
Channel
8
Current time
PM5:20
SP
Starting time
ON TIME
PM 1--
OFF TIME
----:--
Recording mode
Ending time

3 **Set the time for the recording to begin.**

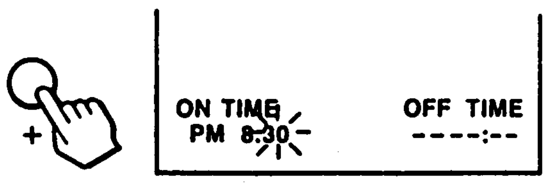
1) Press the + button to set the hour.
Each time you press the + button, the hour indication increases by one. If you keep the button pressed, the indication will increase continuously.


+
ON TIME
PM 8:--
OFF TIME
----:--

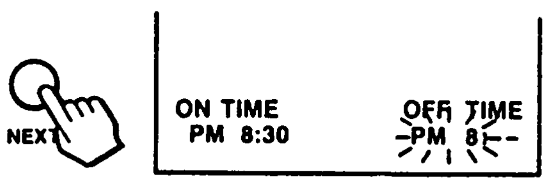
2) Press the NEXT button.


NEXT
ON TIME
PM 8:20
OFF TIME
----:--

3) Press the + button to set the minutes.
Each time you press the + button, the minutes indication increases by one. If you keep the button pressed, the indication will increase continuously.

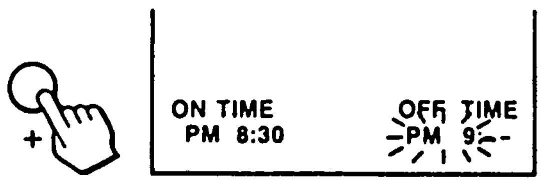

+
ON TIME
PM 8:30
OFF TIME
----:--

4) Press the NEXT button.
The starting time is now set.

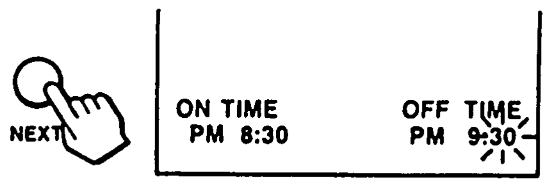

NEXT
ON TIME
PM 8:30
OFF TIME
PM 8:--

4 **Set the time for the recording to stop.**

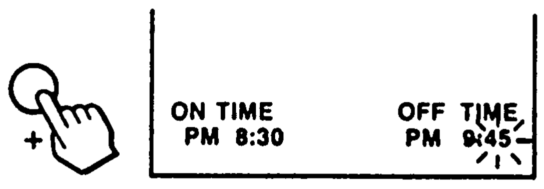
1) Set the hour with the + button.


+
ON TIME
PM 8:30
OFF TIME
PM 9:--

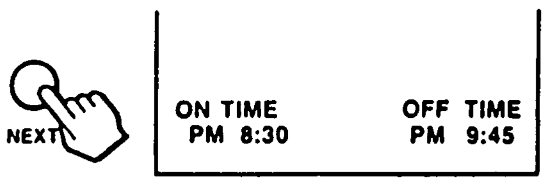
2) Press the NEXT button.


NEXT
ON TIME
PM 8:30
OFF TIME
PM 9:30

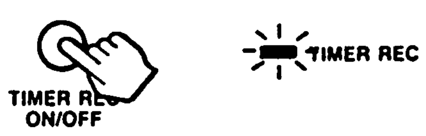
3) Set the minute with the + button.


+
ON TIME
PM 8:30
OFF TIME
PM 9:45

4) Press the NEXT button.
The ending time is now set. The on-screen display disappears.


NEXT
ON TIME
PM 8:30
OFF TIME
PM 9:45

5 **Press the TIMER REC ON/OFF button.**
The power goes off and the TIMER REC lamp lights up (timer recording standby mode). The recording starts automatically at the preset start time and the power goes off at the preset end time.


TIMER REC ON/OFF
TIMER REC

Notes

- During timer recording, both picture and sound will be muted. To listen to the sound and watch the picture, press the LCD ON/OFF button.
- When you press the TIMER REC button, the "CASSETTE" indication will appear if the safety tab on the cassette is slid out or if no cassette is inserted.

To stop the timer recording

Press the TIMER REC ON/OFF button again.
The TIMER REC lamp goes out.

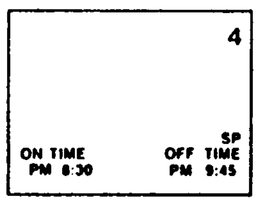
To correct the timer setting before completing the setting

Turn the power off, then on again.
Repeat steps from 1 to 5.

To check the setting

Press the TIMER SET/CHECK button while the TIMER REC lamp is lit.
The power is turned on and the starting and ending time is displayed for a few seconds.

TIMER SET
CHECK



To change the timer setting after completing the setting

Press the TIMER REC ON/OFF button to cancel the timer recording mode, then turn the unit on and set the timer again.

To set the timer while the tape is running

Only the starting and ending time can be set during playback or recording. After stopping the tape, set the recording mode (SP/LP) and channel, and then press the TIMER REC ON/OFF button.

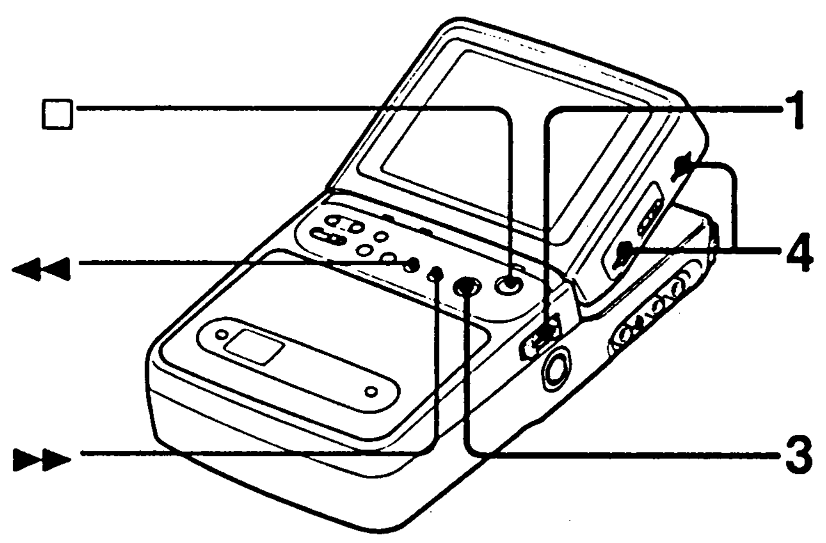
If a power interruption occurs when the unit is connected to the AC power source

Recording stops. Recording starts again after the power is resupplied. When a power interruption occurs during the timer recording standby mode and the power is resupplied, the timer settings will not be affected as long as the lithium battery is installed.

To record to the end of the tape

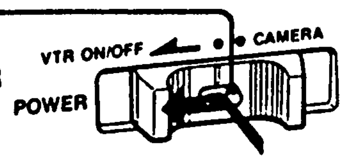
Set the starting and ending time the same. When the tape reaches the end, recording will stop and the power goes off.

Playing Back the Recorded Tapes



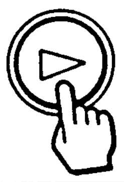
1 Turn the power on.
The POWER lamp lights up.

While pressing the green button, slide the POWER switch to the left.

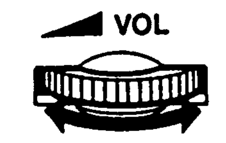


2 Insert a recorded tape (see page 34.)

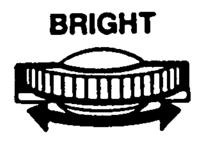
3 Press ▷ to start playback.



4 Adjust the volume and the brightness.



To decrease volume
To increase volume



For less brightness
For more brightness

To stop playback Press the □ button.
To rewind the tape Press the ◀◀ button.
To advance the tape Press the ▶▶ button.

To rewind the tape and play it back automatically — Auto play

While pressing the ◀◀ button, press the ▷ button.
The "AUTO PLAY" indication appears.

To mute the picture

Press the LCD ON/OFF button. To restore the picture, press the LCD ON/OFF button again.

To adjust the picture

Adjust the BRIGHT, COLOR, and HUE controls (see page 32.)

To stop playback at the desired time

Use the SLEEP function.
The unit goes off at the preset time. (see page 33.)

When a tape recorded in stereo mode is played back

The "(S)" indication appears and the STEREO lamp lights up.
To listen to the stereo sound, use the stereo earphones.

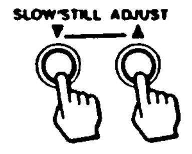
Various Playback Modes — CRYSTAL-CLEAR still/slow/picture search on LCD

To stop the tape for a moment — Still picture	During playback STILL	To resume normal playback, press ▷. These modes will be automatically released and playback will resume after the following time intervals: Still: 5 minutes Slow *: 1 minutes.
To view the slow playback picture	During playback SLOW 1/5	
To locate a particular point while viewing the picture — Picture search	During playback (◀◀) During playback (▶▶)	When you release the button, the unit will return to the previous mode.
To view the picture at high speed — FR picture search	While rewinding (◀◀) While fast forwarding (▶▶)	

* After normal playback is resumed, the I▶ button will not function for about 5 seconds.

If streaks appear in the still and slow playback mode

Adjust the picture as follows:
1 **Play back the slow motion picture.**
2 **Press the SLOW/STILL ADJUST ▼, ▲ buttons to adjust the picture so that the noise does not appear.**



To adjust the upper portion of the picture, press the ▲ button. To adjust the lower portion of the picture, press the ▼ button. The still picture is adjusted at the same time.

When the playback picture is viewed on another TV or monitor

The horizontal bands appear in the still, slow, picture search and FR picture search modes. Noise appears in the still and slow modes. To reduce the horizontal bands, press LCD ON/OFF button to mute the picture of this unit.

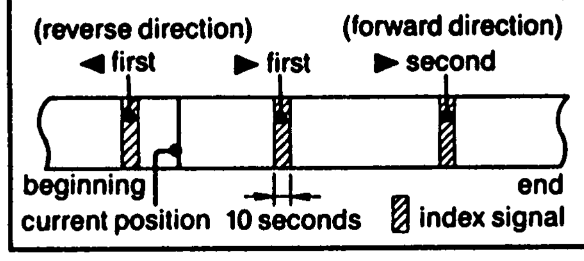
Notes on the CRYSTAL-CLEAR still/slow/picture search on LCD
Noiseless pictures can be viewed in the still, slow and picture search modes, owing to the characteristics of the liquid crystal.

Using Indexes — to Find the Desired Scene Quickly

An index can be recorded on the tape. Using the index, you can find the desired scene quickly. There are two kinds of indexes as follows:

[A] Conventional index

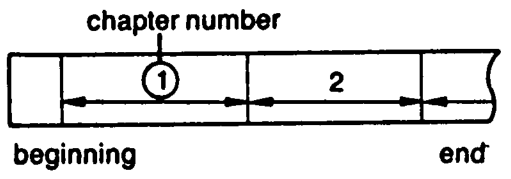
An index on your video tape which you can enter and erase during recording or playback operation. You can find the desired scene by designating the location of the desired index. (e.g. second index in the forward direction, etc.)



(reverse direction)
(forward direction)
◀ first
▶ first
▶ second
beginning
end
current position
10 seconds
▨ index signal

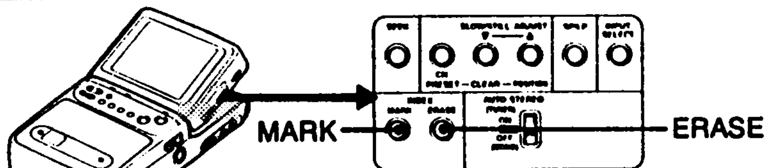
[B] Prerecorded index for software

An index that is already recorded on the commercially available video software. The indexes are already recorded, and you cannot enter or erase them. Each index has the chapter number so you can search the desired part by designating the number.



chapter number
1
2
beginning
end

To Enter an Index on a Tape



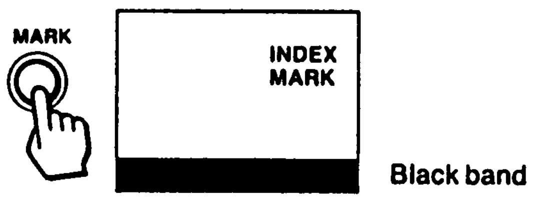
To enter an index during recording

When you start recording with the REC switch or when timer-recording is started, the index signal is automatically recorded for a few seconds*. (Indexes are not recorded when recording with a camera.)

To enter an index during the recording or recording pause mode, press the MARK button. The index signal is recorded for a few seconds*. When the MARK button is pressed during the recording pause mode, the index signal is recorded after you start recording again.

To enter an index during playback

During the playback or playback pause mode, press the MARK button.



MARK
INDEX
MARK
Black band

The index signal is recorded for a few seconds*. A black band appears on the screen, but is not recorded. In this case, no sound is heard. When the MARK button is pressed during the playback pause mode, the index signal is recorded after you resume the playback operation.

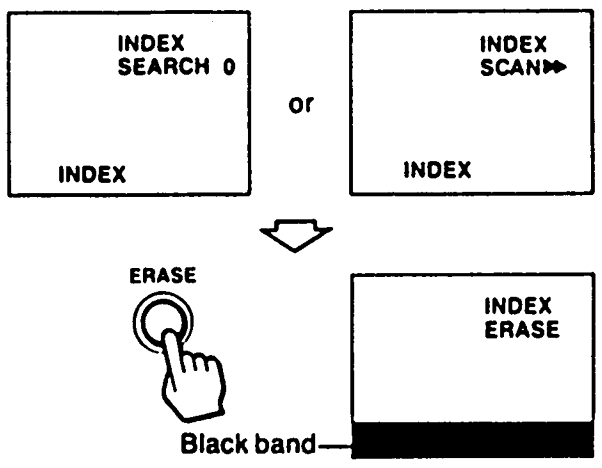
* For SP mode: about 10 seconds
For LP mode: about 18 seconds

Note
Leave at least two minutes between each index. If an interval is too short, you may not be able to find or scan indexes correctly.

To Erase an Index

1 **Search for the index to be erased.(See page 50, 52).**

2 **Press the ERASE button.**
After playback starts, press the button while the following indications on the screen.



INDEX
SEARCH 0
INDEX
or
INDEX
SCAN▶▶
INDEX
ERASE
INDEX
ERASE
Black band

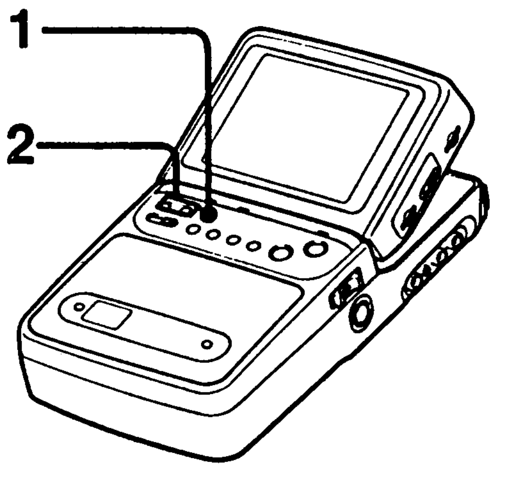
When you press the ERASE button, the tape is rewound to the beginning of the index signal, then the index signal is erased. On the screen, the indication "INDEX ERASE" and the black band appear.

Note
Do not press any of the tape transport buttons while entering/erasing an index. If it is done, entering/erasing will not be completed.

Notes on the index signal
- You cannot enter an index signal on a commercially available video software or on a cassette whose safety tab is slid out.
- You cannot erase an index signal which is prerecorded on a commercially available video software.
- The index signal cannot be erased in the following cases:
  - — When the index signal is recorded on a video camera recorder or other VCRs, and you wish to erase it on this unit.
  - — When the index signal is recorded on this unit, and you wish to erase it on a video camera recorder or other VCRs.
- To erase the index signal completely, use the equipment you used to enter the index signal.

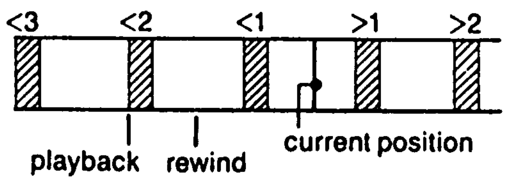
To Find a Desired Index — Index Search

When you know the location or chapter number of the desired index, you can designate a number to find the desired part of the tape.



[A] Conventional index

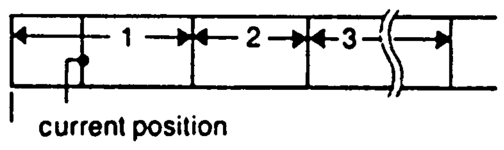
Example: designating the second index in the reverse direction



<3
<2
<1
>1
>2
playback
rewind
current position

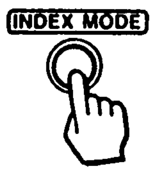
[B] Prerecorded index for software

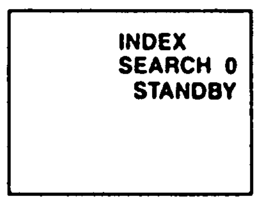
Example: designating chapter number 7



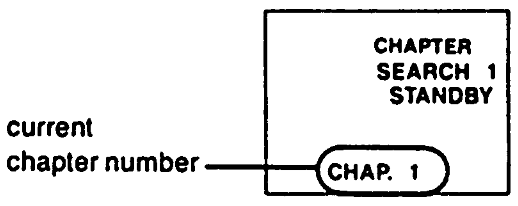
1
2
3
current position

1 **Press the INDEX MODE button once during playback or the playback pause mode.**
The unit enters the index standby mode.



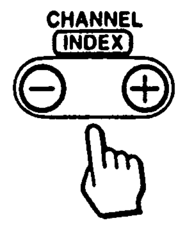


INDEX
SEARCH 0
STANDBY



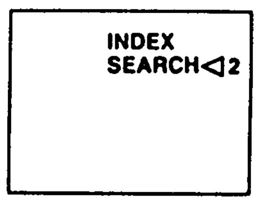
CHAPTER
SEARCH 1
STANDBY
current
chapter number
CHAP. 1

2 **Press INDEX –/+ button repeatedly until the desired index number appears on the screen.**
The tape is rewound or fast forwarded to the designated index number position, then playback starts.



CHANNEL
INDEX

Determine the number of indexes between the current position and the desired index. Select the appropriate number.
Press + for ▷ (forward) direction, – for ◁ (reverse) direction.

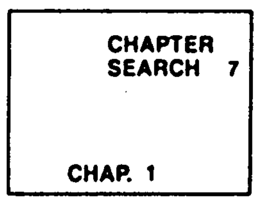


INDEX
SEARCH◁2

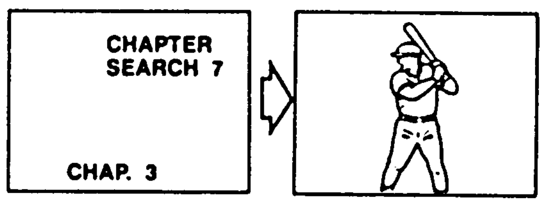
INDEX
SEARCH 2
INDEX

When playback starts, the indication will disappear after about 10 seconds.

Select the chapter number referring to the number on the jacket of the cassette tape.
Press + for a higher number, and – for a lower number.



CHAPTER
SEARCH 7
CHAP. 1



CHAPTER
SEARCH 7
CHAP. 3

When playback starts, the indication disappears after about 10 seconds.

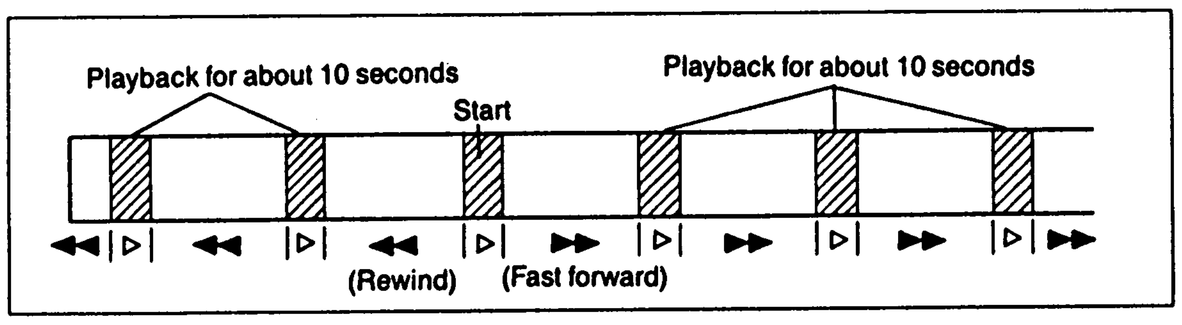
To correct the chapter or index number
When the "CHAP" or "INDEX" indications are displayed, you can correct the number with the INDEX –/+ button.

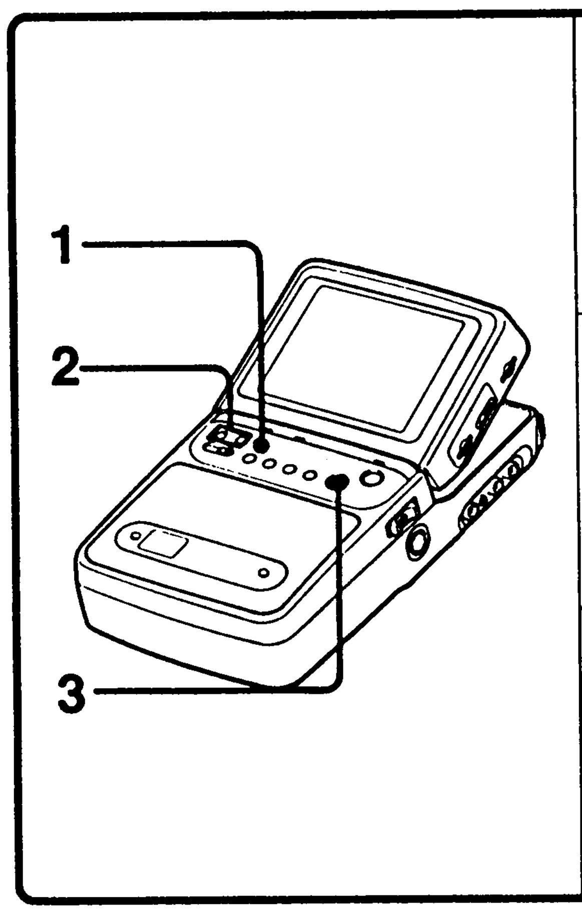
Note
Even with a video software which has prerecorded indexes, the indication is "INDEX SEARCH" until the tape is played back.

Index search does not function if an interval between indexes is less than two minutes. Leave an interval of at least two minutes between indexes.

To Scan Each Index Sequentially

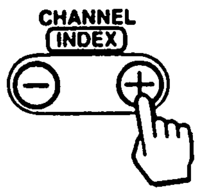
The beginning of each index/chapter is played back for about 10 seconds sequentially. Start playback at the desired index/chapter.


Playback for about 10 seconds
Start
Playback for about 10 seconds
(Rewind)
(Fast forward)

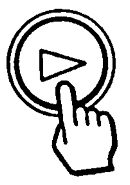


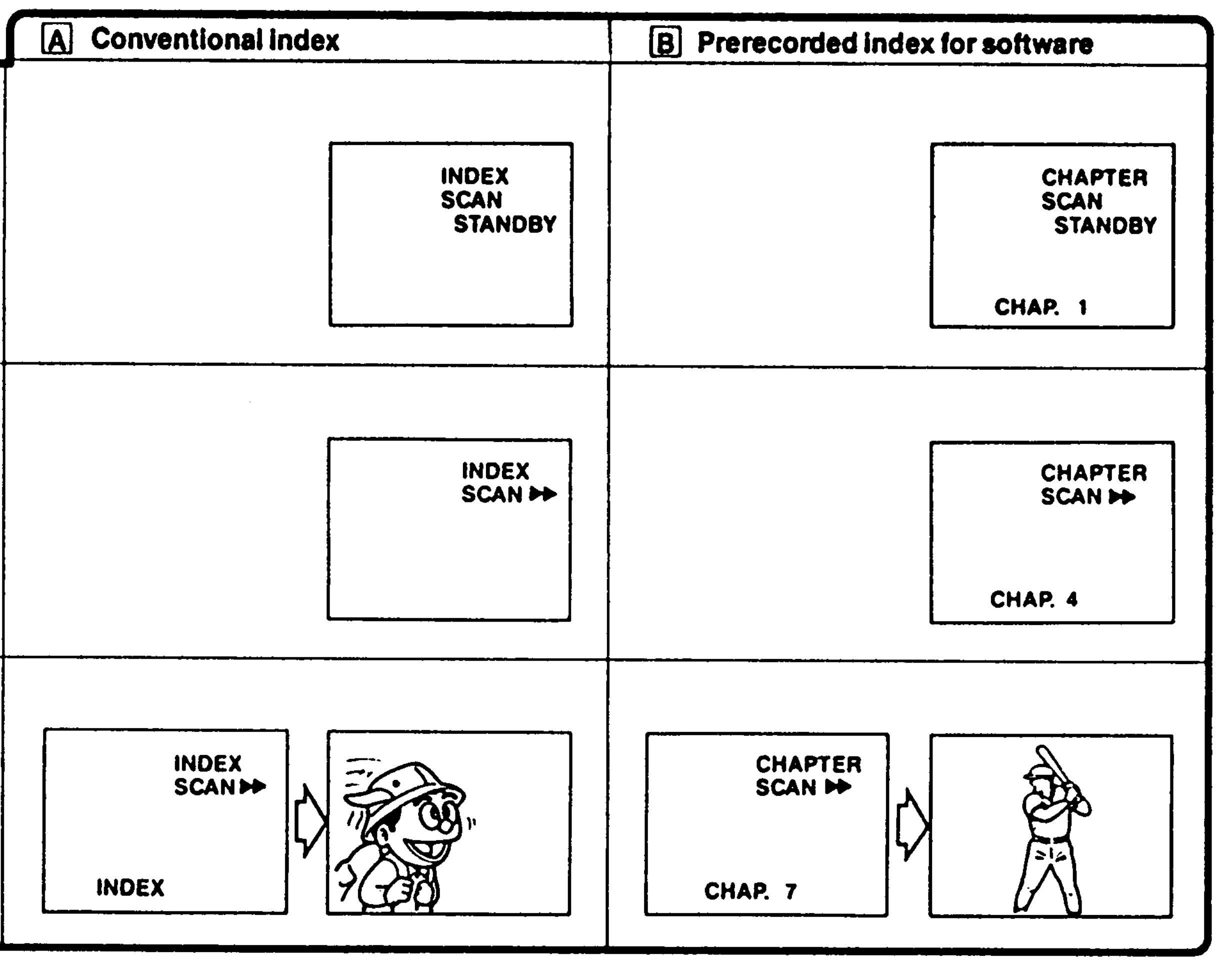
1 During playback or the playback pause mode, press the INDEX MODE button twice.
The unit goes into the index standby mode.

2 Press INDEX –/+ button.
Each chapter/index is played back for about 10 seconds sequentially.
Press + for ▶▶ direction, and press – for ◀◀ direction.


CHANNEL
INDEX

3 Press ▷ button at the desired point.




A Conventional index
B Prerecorded index for software
INDEX SCAN STANDBY
CHAPTER SCAN STANDBY
CHAP. 1
INDEX SCAN ▶▶
CHAPTER SCAN ▶▶
CHAP. 4
INDEX SCAN ▶▶
INDEX
CHAPTER SCAN ▶▶
CHAP. 7

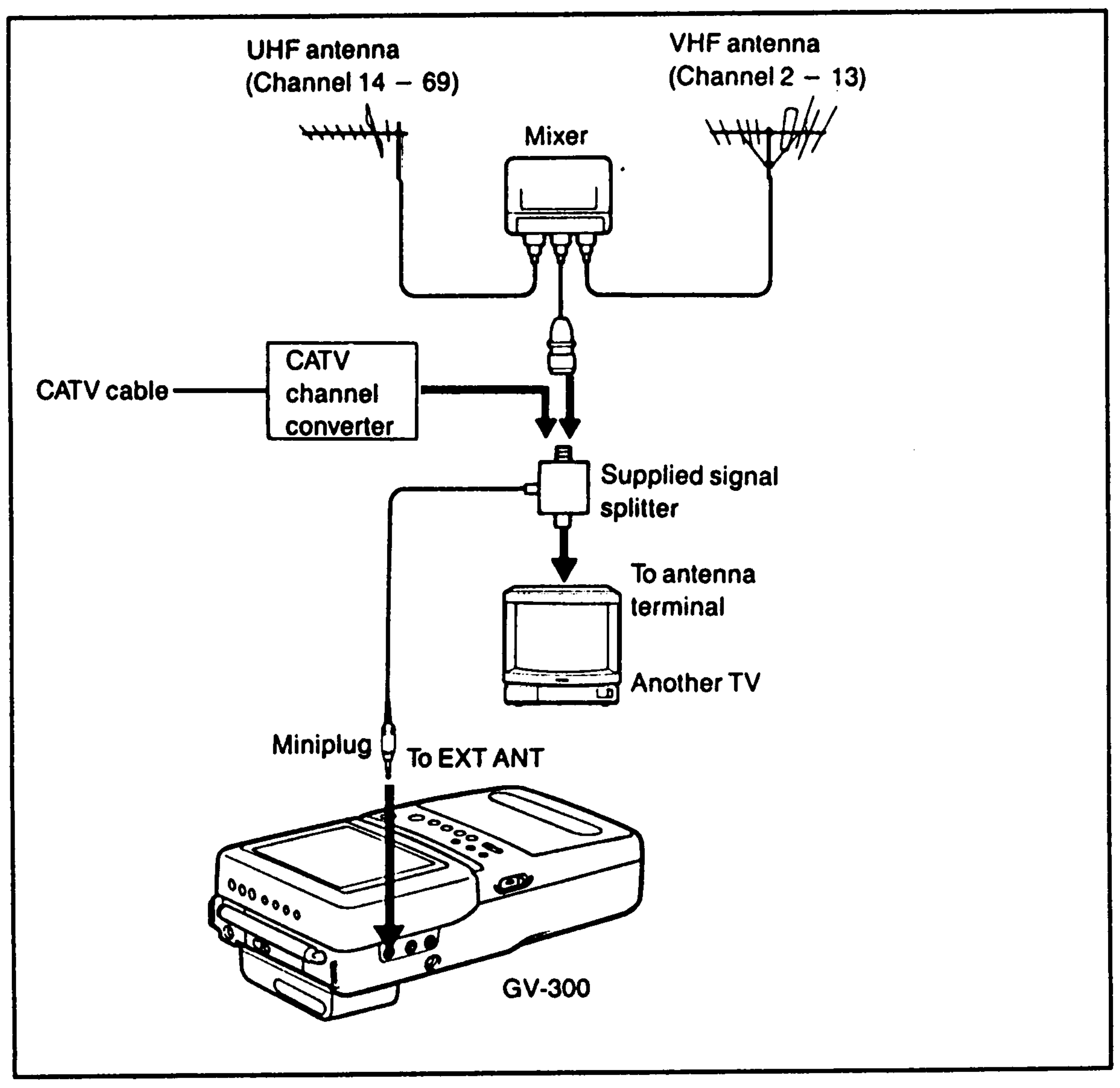
To correct the direction of index scan
Press INDEX –/+ during index scanning.

Index scan does not function if an interval between indexes is less than two minutes. Leave an interval of at least two minutes between indexes.

If you do not press the ▷ button during index scanning, the tape will be rewound or fast forwarded to the end of the tape.

Connecting an Outdoor Antenna and CATV cable

If you cannot obtain satisfactory reception with the telescopic antenna, or when recording TV programs, use an outdoor antenna. For viewing CATV channels, connect the CATV cable.


UHF antenna
(Channel 14 – 69)
VHF antenna
(Channel 2 – 13)
Mixer
CATV cable
CATV channel converter
Supplied signal splitter
To antenna terminal
Another TV
Miniplug
To EXT ANT
GV-300

For connection, you can also use the antenna connector EAC-40, the signal splitter EAC-45, the antenna cord CCD-6M, and CCD-2 (not supplied.)

Notes
- Before connecting the antennas, turn off the unit.
- Make connections firmly. A loose connection may cause a distorted picture.
- When using the unit in a car, use the optional VCA-3W or VCA-4E car antenna, etc. For details, refer to the instruction manual of the car antenna.

Connecting other VCRs or Monitors

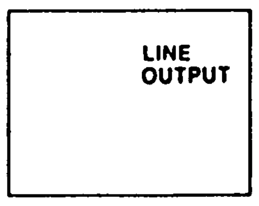
Notes on the VIDEO/AUDIO IN/OUT Jacks

The VIDEO/AUDIO IN/OUT jacks are automatically set to the input or output jacks according to the operating condition of the unit.

Refer to the following diagram:

Mode selected with INPUT SELECTION button	Stop or recording mode	Playback mode
TUNER (TV program)	output	output
LINE *	input	output
CAMERA	output	output

* When the LINE mode is selected with INPUT SELECT, the INPUT or OUTPUT indication appears with LINE.

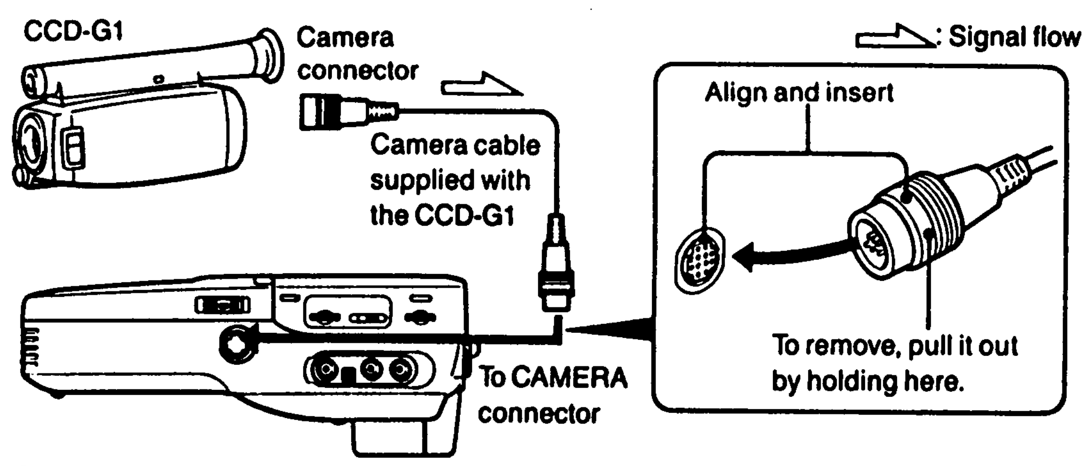

LINE
OUTPUT

Note
When the LINE OUT jacks of other equipment are connected to the VIDEO/AUDIO IN/OUT jacks on this unit, and signals are output from the jacks of the other equipment to this unit, the picture and sound of the other equipment may be distorted.
In such case, turn off the power of this unit or disconnect the other equipment.

Camera Recording — Controlling from the Camera

By connecting an optional Video Camera CCD-G1, recording controlled from the camera is possible. You can hold the camera and keep this unit in a carrying case while recording.
For details, refer to the instruction manual of the video camera.

Connection


CCD-G1
Camera connector
: Signal flow
Align and insert
Camera cable supplied with the CCD-G1
To remove, pull it out by holding here.
To CAMERA connector

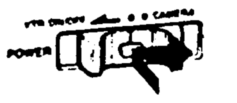
- Select the recording mode (SP/LP).

Note
The sound will be recorded in monaural.

Recording with CCD-G1

1 Insert the cassette.

2 Set the POWER switch of this unit to CAMERA.
The power of this unit is turned on, and the POWER, STEREO lamp lights up. This unit automatically becomes in the recording pause mode. To have the picture on the screen of this unit, press the LCD ON/OFF button.



While pressing the green button, slide to the right.

Note
Be sure that the POWER lamp lights up. If it does not, turn off the unit once by sliding the POWER switch to the left, then reset the switch to the CAMERA position.

3 Start recording.
Press the REC START/STOP button of the camera.

To index the recording starting point or the desired point, press the MARK button of this unit (see page 48.)

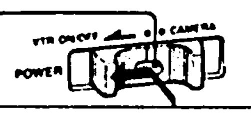
To stop recording for a moment
Press the REC START/STOP button. Press it again to start recording.

To stop recording
Turn the power off of this unit by setting the POWER switch to the center position.

Playing back the newly recorded pictures

1 Turn the power on of this unit.
The POWER lamp lights up.

While pressing the green button, slide to the left.



2 Press ◁ ◁ button of this unit to rewind the tape.

3 Press ☐ button of this unit.

4 Press ▷ button of this unit.

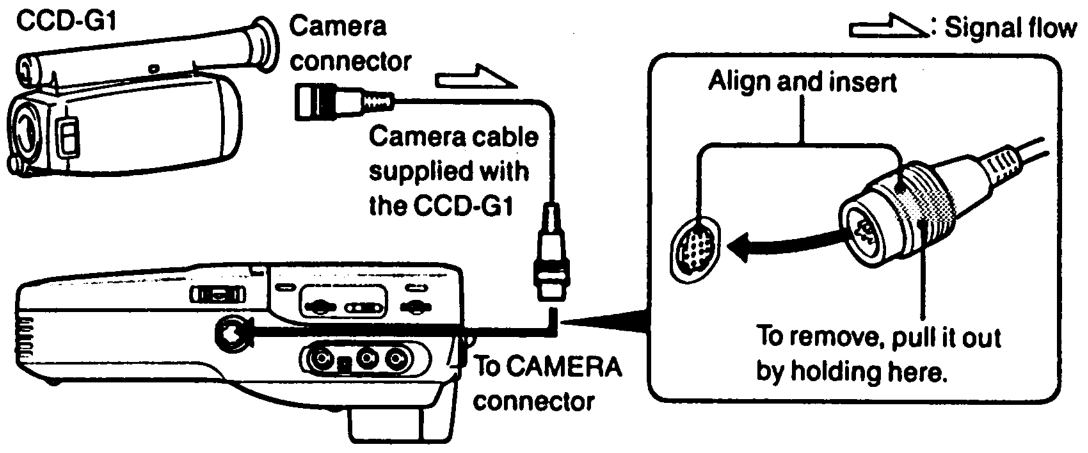
Caution
Do not operate this unit for a long time when it is in a carrying case like the one supplied. Internal heat build-up may occur which can cause this unit to malfunction.

When the POWER switch is set to CAMERA, the operable buttons are:
POWER switch, EJECT button, LCD ON/OFF button, DATA SCREEN button, COUNTER RESET button, INDEX mark button, and SP/LP button.

Camera Recording — Controlling from This Unit

By connecting the optional video camera CCD-G1, it is possible to record with this unit while using the camera in a distant place. For details, refer to the instruction manual of the video camera.

Connection


CCD-G1
Camera connector
: Signal flow
Align and insert
Camera cable supplied with the CCD-G1
To remove, pull it out by holding here.
To CAMERA connector

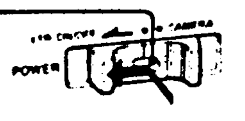
- Select the recording mode (SP/LP).

Note
The sound will be recorded in monaural.

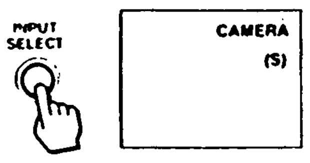
Recording

1 Turn the power on of this unit.
The POWER lamp lights up.

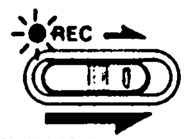
While pressing the green button, slide the POWER switch to the left.



2 Press the INPUT SELECT button of this unit to display "CAMERA" on the screen.
The STEREO lamp lights up. The picture to be recorded appears on the screen. If the focus or color need adjustments, adjust them on the camera. To have the picture disappear, press the LCD ON/OFF button.



3 Slide the REC switch of this unit.
Recording starts.



To stop recording for a moment
Press ❚❚ button of this unit.

To stop recording
Press ☐button of this unit.

Playing back the newly recorded pictures

1 Press ◀◀ button to rewind the tape.

2 Press ☐ button.

3 Press ▷ button.

Recording with a camera from a distant place

Use the optional pan tilter HVR-200 for camera recording from a distant place, a maximum distance of 5m.

To listen to the sound that is being recorded
While recording, no sound is heard from the speaker. Connect the supplied stereo earphones to PHONES jack to listen to the sound.

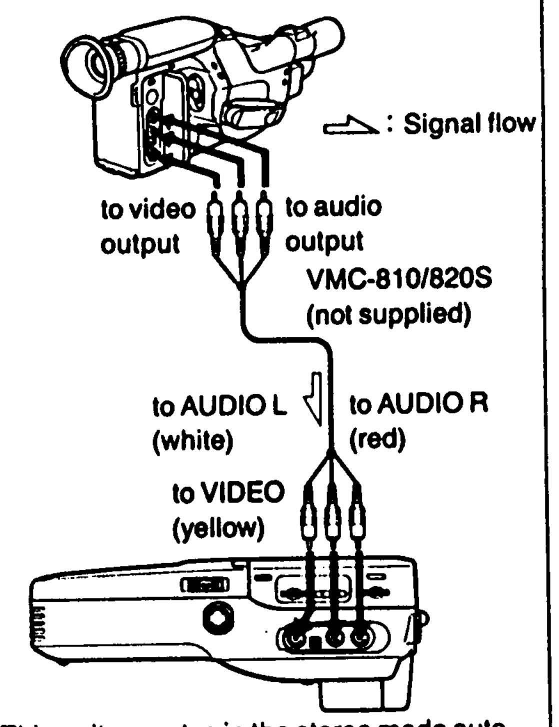
To use a camera with the timer-activated recording feature
This feature allows you to record a desired activity at a designated time, for example, a train passing by at a certain time. To set the timer, see page 41. The recording will start automatically at the time you set.

Using This Unit as a 8mm Video Camera Recorder Monitor

With the following connection, you can view pictures being recorded by the connected video camera recorder. Also you can view the playback pictures from the video camera recorder on this unit.

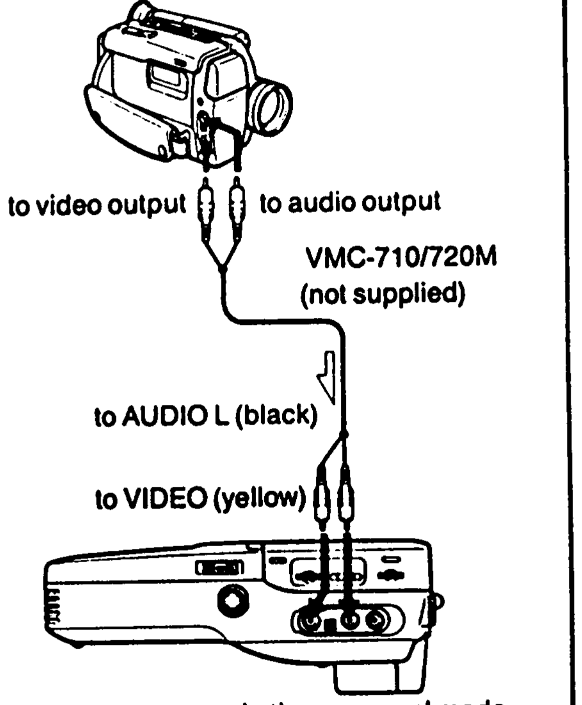
Connection

If the video camera recorder is stereo


: Signal flow
to video output
to audio output
VMC-810/820S
(not supplied)
to AUDIO L (white)
to AUDIO R (red)
to VIDEO (yellow)

This unit operates in the stereo mode automatically.

If the video camera recorder is monaural

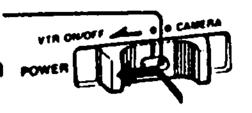

to video output
to audio output
VMC-710/720M
(not supplied)
to AUDIO L (black)
to VIDEO (yellow)

This unit operates in the monaural mode automatically.

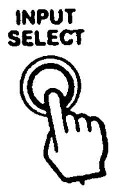
Operation

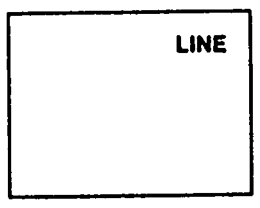
1 **Turn the power on.**
The POWER lamp lights up.

While pressing the green button, slide the POWER switch to the left.


VTR ON/OFF
CAMERA
POWER

2 **Press the INPUT SELECT button to display "LINE" on the screen.**


INPUT SELECT

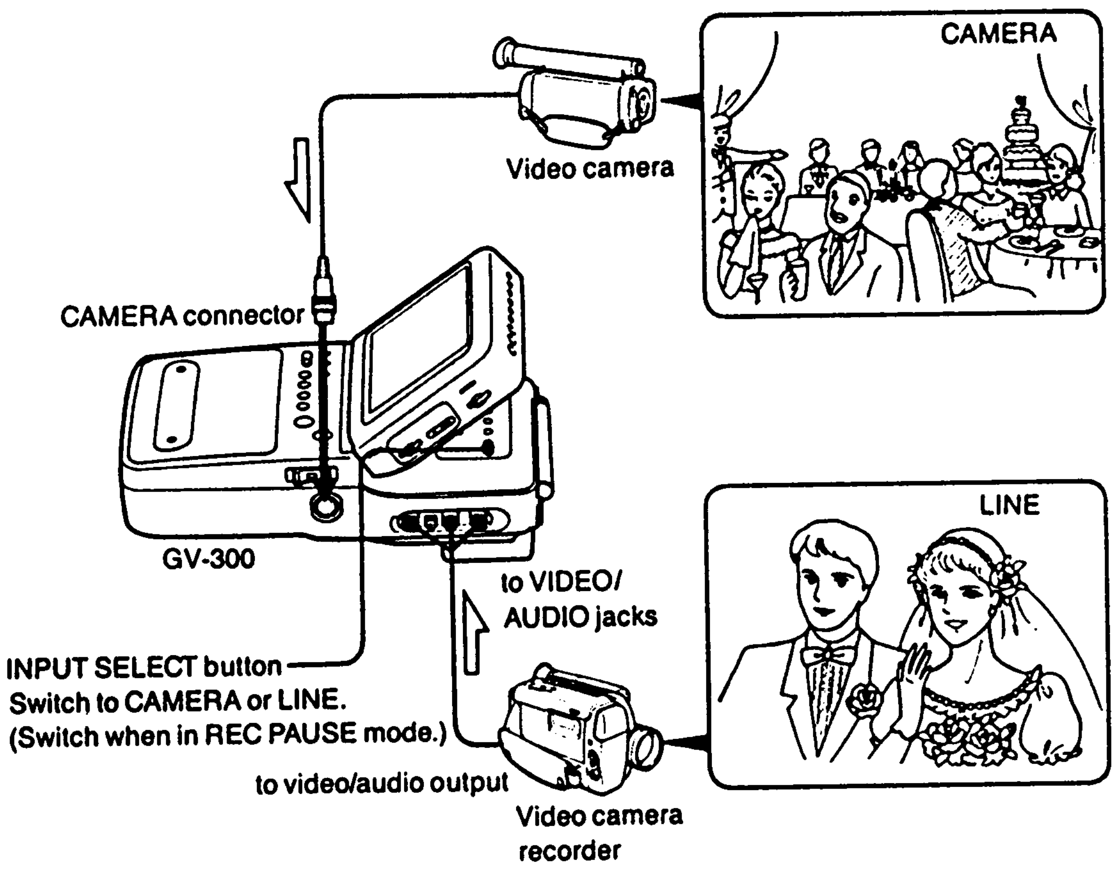


3 **Operate the video camera recorder.**

When connecting both a video camera recorder and a video camera

Set each unit to different angles, then, using the INPUT SELECT button, switch the picture to be recorded on this unit.

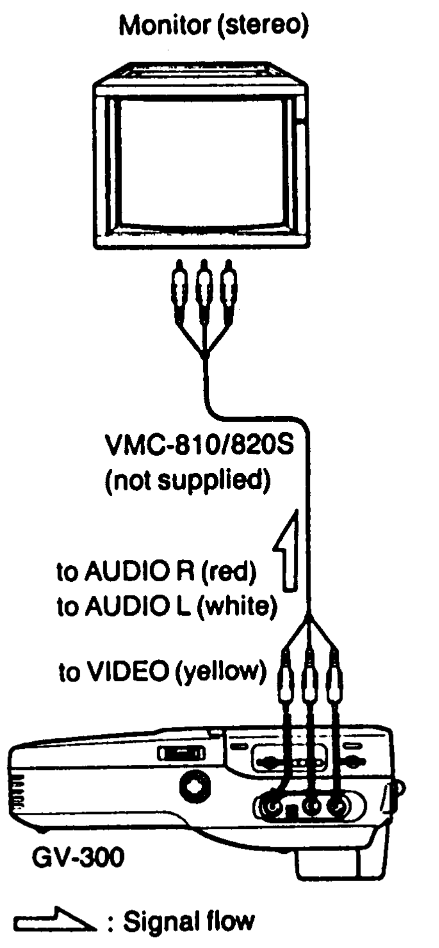
: Signal flow

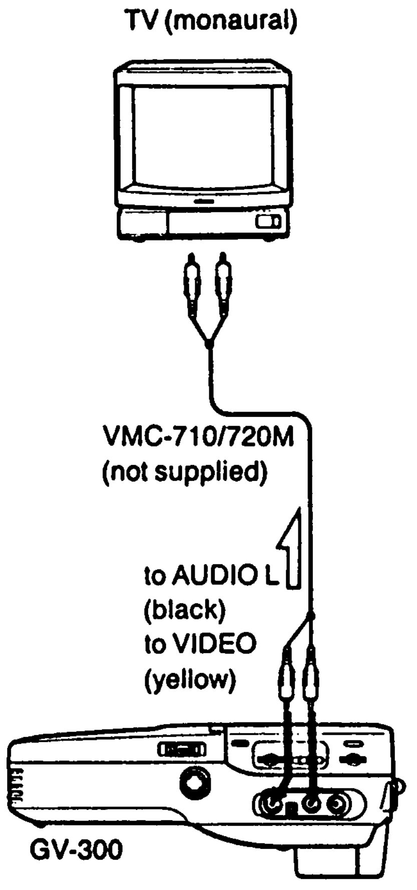

CAMERA
Video camera
CAMERA connector
GV-300
LINE
to VIDEO/ AUDIO jacks
INPUT SELECT button
Switch to CAMERA or LINE.
(Switch when in REC PAUSE mode.)
to video/audio output
Video camera recorder

To Connect Another TV or Color Monitor

If you connect this unit to another TV or color monitor, you can view the playback pictures or the selected TV program on a larger screen and listen to the dynamic sound.
In this case, mute the picture of GV-300 by pressing the LCD ON/OFF button to reduce horizontal bands and noise in the picture of the TV or color monitor during various playback modes.

To connect a TV/monitor with video and audio inputs

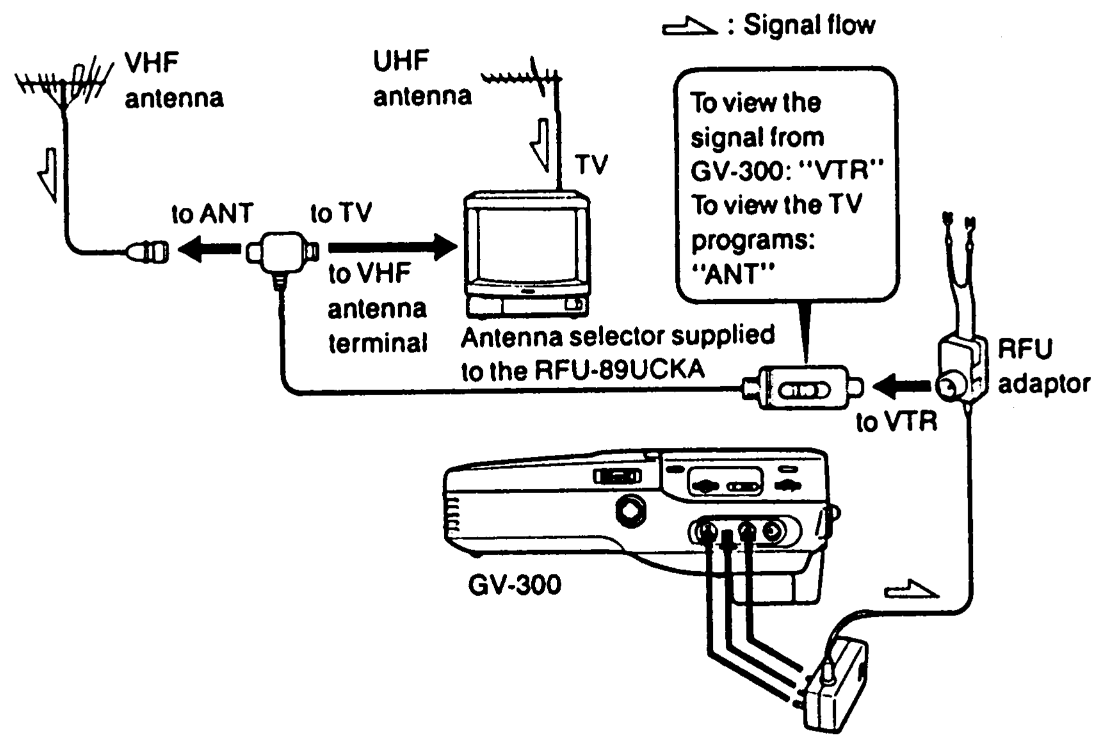

Monitor (stereo)
VMC-810/820S
(not supplied)
to AUDIO R (red)
to AUDIO L (white)
to VIDEO (yellow)
GV-300
: Signal flow


TV (monaural)
VMC-710/720M
(not supplied)
to AUDIO L (black)
to VIDEO (yellow)
GV-300

Note
When connecting only to the AUDIO L jack, the L and R sounds are automatically mixed and always output is monaural.

To connect a TV without video and audio inputs

Use the RFU-89UCKA RFU kit (not supplied).


: Signal flow
VHF antenna
UHF antenna
TV
to ANT
to TV
to VHF antenna terminal
To view the signal from GV-300: "VTR"
To view the TV programs: "ANT"
Antenna selector supplied to the RFU-89UCKA
RFU adaptor
to VTR
GV-300

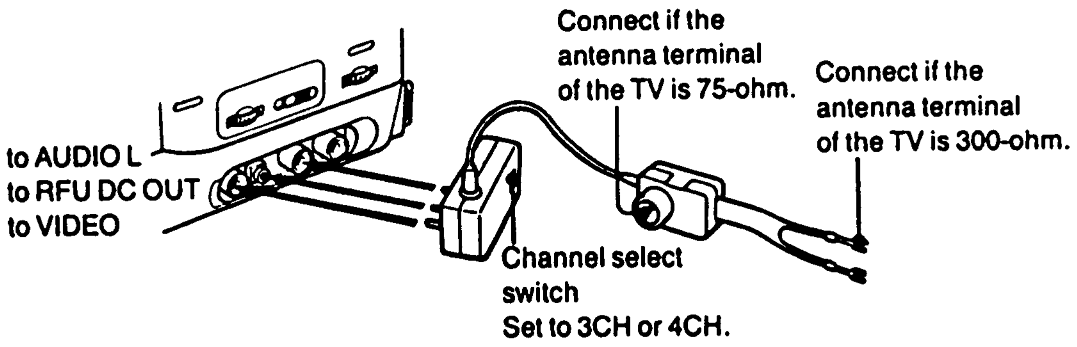
Note on the RFU-89UCKA RFU kit

The RFU-89UCKA includes the following accessories:
— RFU adaptor (1)
— Antenna selector (1)
— Antenna selector adaptor (1)

Channel for VCR

To view the playback picture of this unit, set the antenna selector of the RFU kit to channel 3 or 4, whichever channel is not active in your area, and select the same channel on the connected TV.

To connect the RFU adaptor

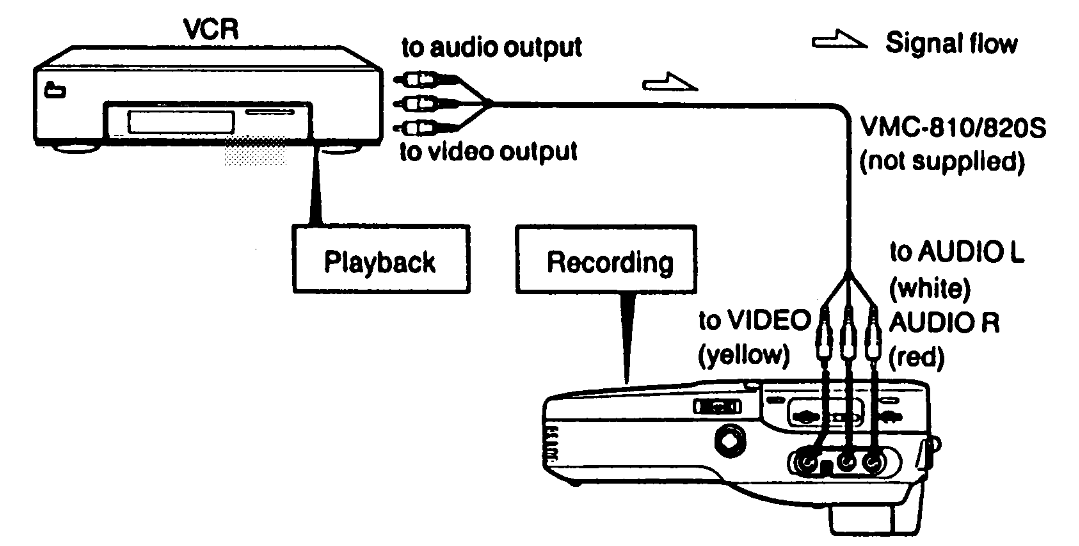

Connect if the antenna terminal of the TV is 75-ohm.
Connect if the antenna terminal of the TV is 300-ohm.
to AUDIO L
to RFU DC OUT
to VIDEO
Channel select switch
Set to 3CH or 4CH.

Editing Tapes

You can edit tapes by connecting when another VCR (8mm, Beta or VHS format) with video/audio input.

To Edit from Another VCR to This Unit

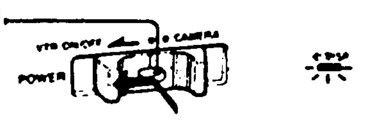
Connection


VCR
to audio output
Signal flow
to video output
VMC-810/820S
(not supplied)
Playback
Recording
to AUDIO L
(white)
to VIDEO
(yellow)
AUDIO R
(red)

If the VCR to be connected has a monaural audio output only, use a commercially available connecting cord such as the VMC-910/920M. In this case, connect to the AUDIO L and VIDEO jacks.

Operation

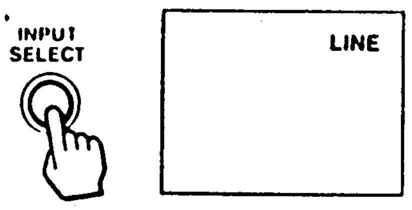
1 Turn the power on.
The POWER lamp illuminates.


VTR ON/OFF
CAMERA
POWER

While pressing green button, slide the POWER switch to the left.

2 Insert the cassette.

3 Press the INPUT SELECT button so that the "LINE" indication appears.


INPUT
SELECT
LINE

4 Select the recording mode (SP/LP) by pressing the SP/LP button.

5 Play back the tape on another VCR and press the ❚❚ PAUSE button at the point you want to start playing back.

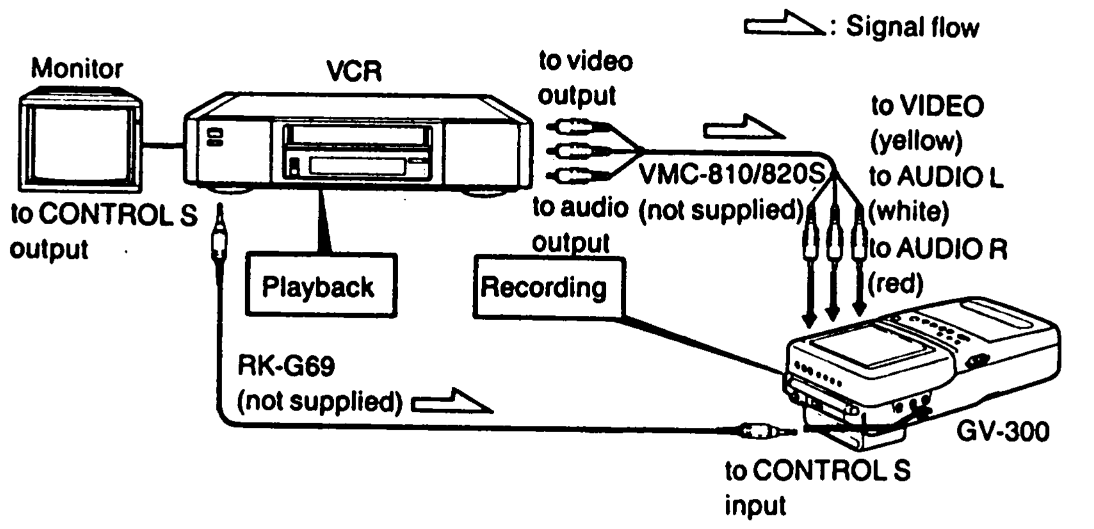
6 Set this unit in the recording pause mode.

7 Release the ❚❚ PAUSE buttons on both units.

8 After editing is completed, press the ◻ STOP buttons on both units to stop recording.

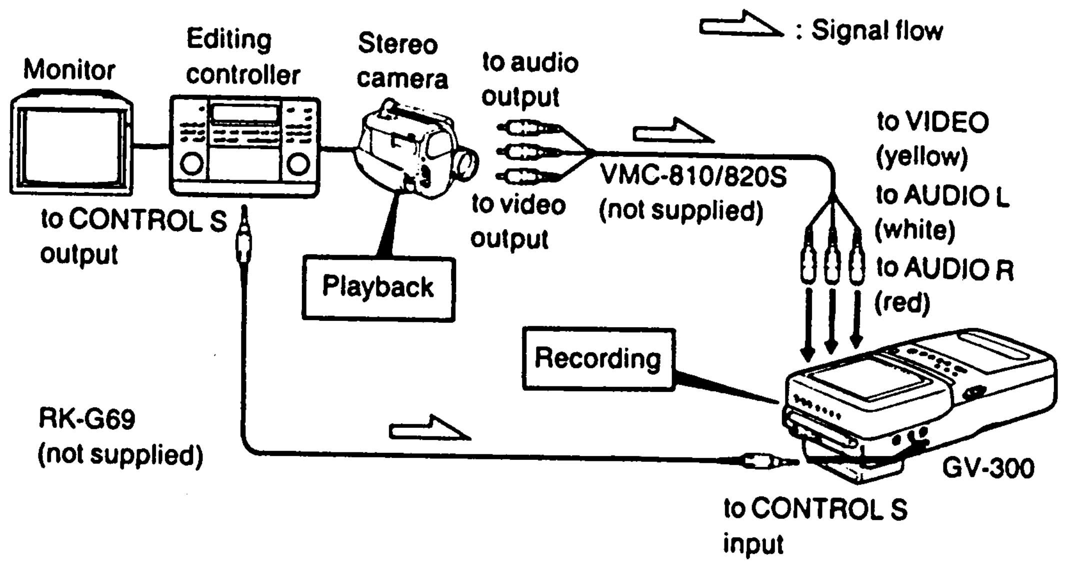
To edit from the VCR equipped with the CONTROL S output

Connect the CONTROL S input jack on this unit and the CONTROL S output jack on the other equipment.
Playback/pause on the other VCR and recording/pause on this unit can be operated simultaneously.

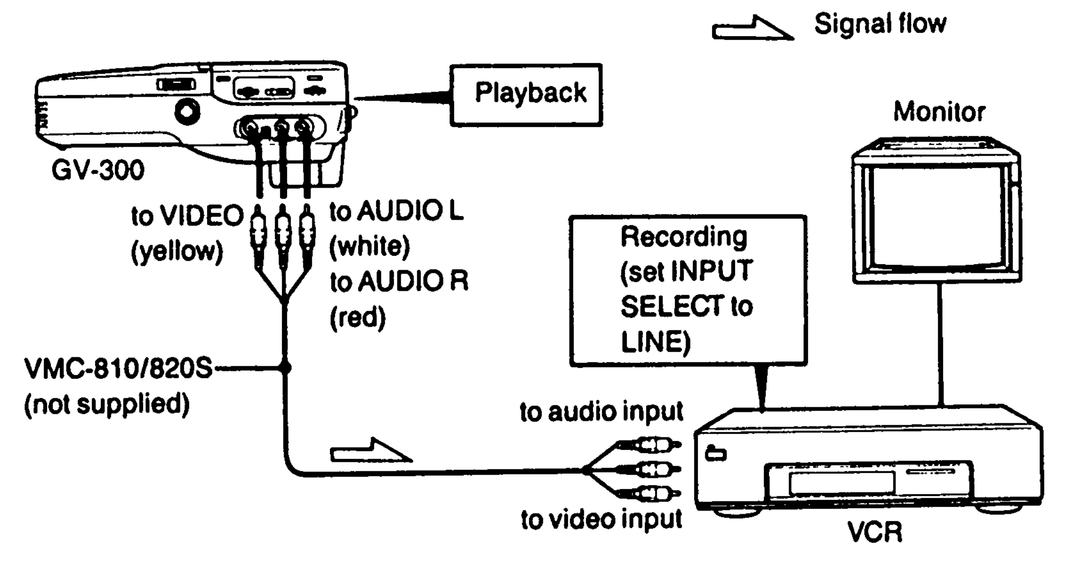

: Signal flow
Monitor
VCR
to video output
to VIDEO (yellow)
VMC-810/820S
to AUDIO L
to audio output
(not supplied)
(white)
to AUDIO R
(red)
to CONTROL S output
Playback
Recording
RK-G69
(not supplied)
GV-300
to CONTROL S input

To edit with the editing controller

By connecting the editing controller, the recorder and player can be operated easily with the controller.


: Signal flow
Monitor
Editing controller
Stereo camera
to audio output
to VIDEO (yellow)
VMC-810/820S
to AUDIO L
to CONTROL S output
to video output
(not supplied)
(white)
to AUDIO R
(red)
Playback
Recording
RK-G69
(not supplied)
GV-300
to CONTROL S input

To Edit from This Unit to Another VCR



If the VCR to be connected has a monaural audio input only, use a commercially available connecting cord such as VMC-710/720M. In this case, connect to the AUDIO L and VIDEO jacks.

Precautions

Operation

- Operate the unit on 6.0 V (battery pack)/7.5 V (AC power adaptor)/6.5 V (DC pack DCP-77).
- For DC or AC operation, use the accessories supplied or recommended in this manual.
- Should any solid object or liquid fall into the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- Avoid rough handling or mechanical shock to the unit.
- Do not apply excessive force to the LCD.
- Remove and store video cassettes after recording or playback.
- Do not wrap up the unit and operate it because heat may build up internally.
- Avoid using and storing the recorder in the following locations:
  - — Locations susceptible to vibration
  - — Locations exposed to strong magnetic fields
  - — Locations near TV or radio transmitters where strong radio waves are generated
- Do not place the unit on the sand.

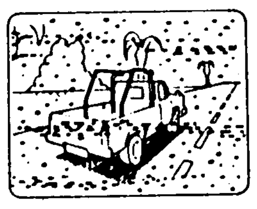
Care

- When the unit is not used for a long period of time, periodically turn on the power, operate the recorder and play back a tape for about three minutes.
- Clean the recorder body with a dry, soft cloth, or a soft cloth lightly moistened with a mild detergent solution. Do not use any type of solvent which may damage the finish.

Maintenance

Video Head Cleaning

To ensure a clear picture, clean the video heads periodically.
If playback pictures are noisy or hardly visible, the video heads may be contaminated. In this case, clean the video heads with the Sony V8-25CLH cleaning cassette (not supplied) according to the instructions.



Caution
Do not use commercially available wet-type cleaning cassettes. They may damage the video heads.

Note
If the V8-25CLH cleaning cassette is not available in your area, consult your Sony service facility.

If the Video Head is Damaged

When playback pictures are not clear even after using the cleaning cassette, the video head may be damaged. In this case, the video head needs to be replaced with a new one. Consult your Sony service facility for replacing the video head.

Note on the built-in lighting system

A built-in lighting system is assembled inside the liquid crystal screen of this unit. The life of the small fluorescent tube used for this built-in lighting system runs out over a period of use. If the lamp becomes dimmer or goes off immediately after you turn it on, even with new batteries, replace the lamp with a new one. To replace the lamp, consult the dealer where you purchased the unit, or a Sony service facility. The expected life of the small fluorescent tupe is about three years if this unit is used for an hour each day. When you use this unit in a cold environment, the fluorescent tube will be dimmer at first. As soon as the temperature of the tube rises, it will regain its original brightness.

Note on the LCD

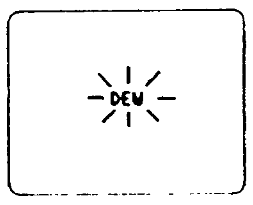
- Do not push the display forcibly.
- Do not operate the unit where the temperature is below 0°C (32°F) or above 40°C(104°F).
- If the unit is used in a cold place, a residual image may appear on the screen. This is not a malfunction of the unit.
- Constant bright points of light (red, blue, or green) may appear on the screen. This is not a malfunction of the unit.

Notes on Moisture Condensation

If this unit is brought directly from a cold place to a warm place, moisture may condense inside the unit or on the surface of the tape. If this happens, the tape may stick to the head drum, damaging both the tape and the unit. Although this unit is furnished with a moisture sensor to prevent possible damage from condensation, do not leave the tape inside the unit.

If moisture condenses inside the unit

The "DEW" indication appears on the screen.
In this case, no button will function except the EJECT button. (However, if you have been watching a TV program, you can continue to do so.)
Eject the cassette, turn off the unit and leave the cassette holder open at least for an hour.



The unit can be used again if the DEW indication does not appear when one of the tape transport buttons is pressed.

Using Your Video TV Recorder Abroad

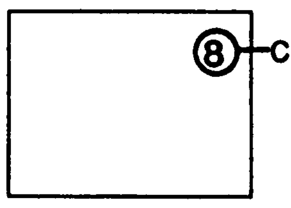
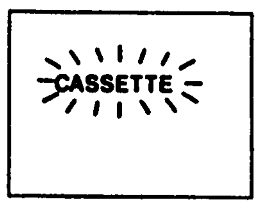
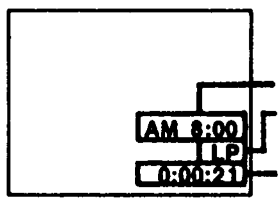
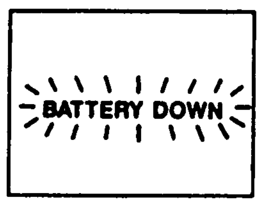
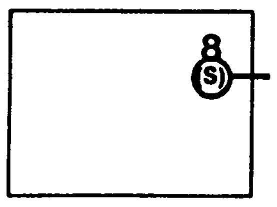
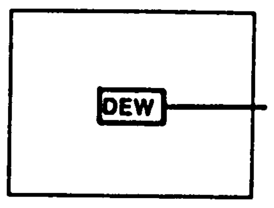
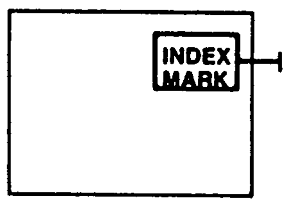
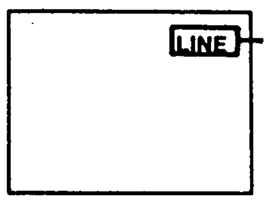
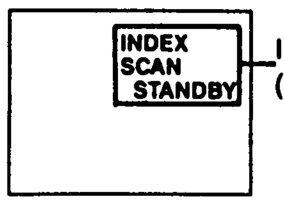
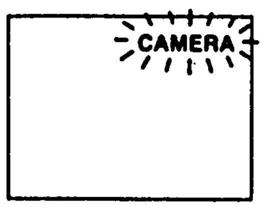
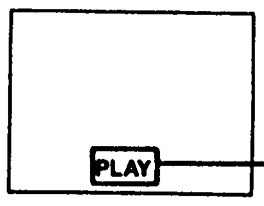
If you prepare fully charged battery packs and the supplied AC power adaptor (which can be used in all areas with a local power supply of 100 V-240 V), you can use your recorder in any country.

Each country has special TV color broadcast and electricity systems. This unit is designed to record and play back using the NTSC color video signals. Recording and playback of video sources based on other color systems cannot be guaranteed.

NTSC system countries
Bahama Islands, Canada, Central America, Japan, Korea, Mexico, Taiwan, the Phillipines, U.S.A., etc.

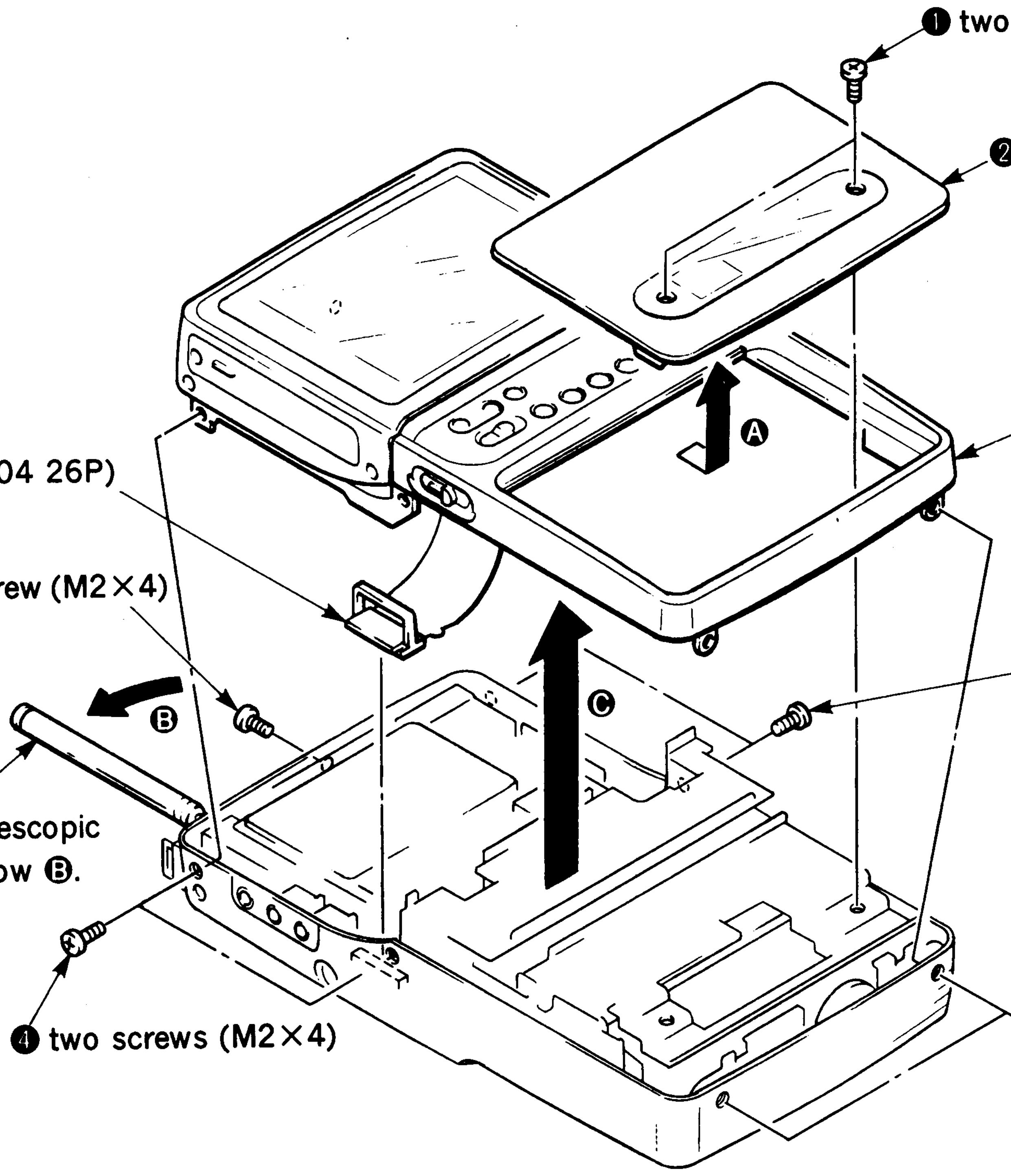
List of On-Screen Displays

The following indications appear on the screen indicating the operation condition and cautions.

Indication	Meaning (reference page)	Indication	Meaning
	Channel (page 28)		Caution for the cassette (page 38)
	Current time Recording mode (page 37) Counter (page 39)		Battery is exhausted (page 14)
	Stereo (page 31)		Moisture condensation (page 71)
	Index (page 48)		Input from VIDEO/AUDIO jack (page 55)
	Index operation (page 48 ~ 53)		Input from CAMERA connector (page 59)
	Tape transport operation (page 47)		

SECTION 2
DISASSEMBLY

2-1. REMOVAL OF CABINET (UPPER) ASSY



❶ two screws (M1.7×5.5)

❷ Remove the lid assy, cassette compartment in the direction of arrow Ⓐ.

❻ FP-271 flexible board to SV-38 board (CN004 26P)

❺ Remove the cabinet (upper) assy in the direction of arrow Ⓒ.

❹ screw (M2×4)

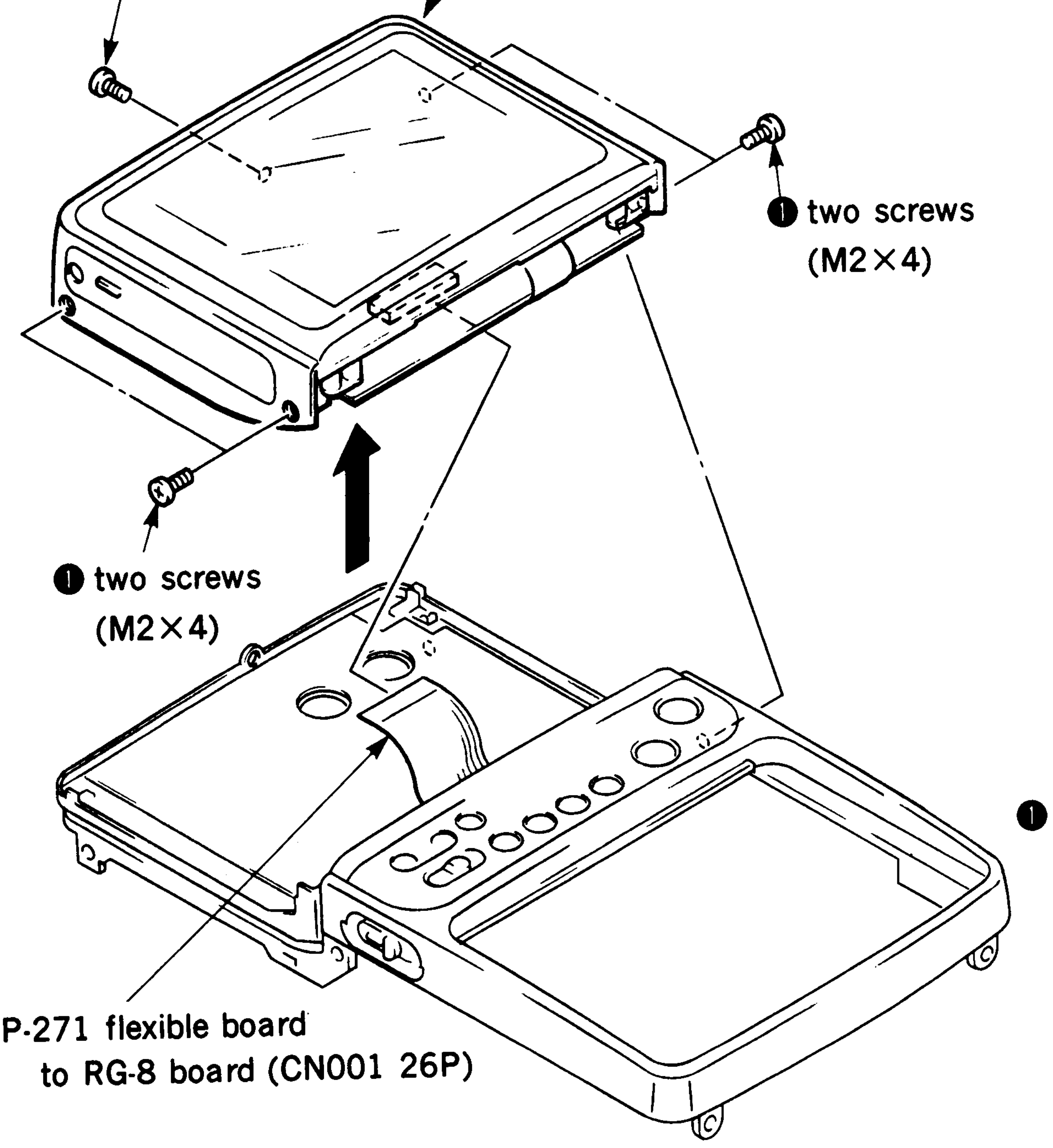
❹ two screws (M2×4)

❸ Stand the antenna telescopic in the direction of arrow Ⓑ.

❹ two screws (M2×4)

❹ two screws (M2×4)

2-2. REMOVAL OF SC UNIT



❶ screw (M2×4)

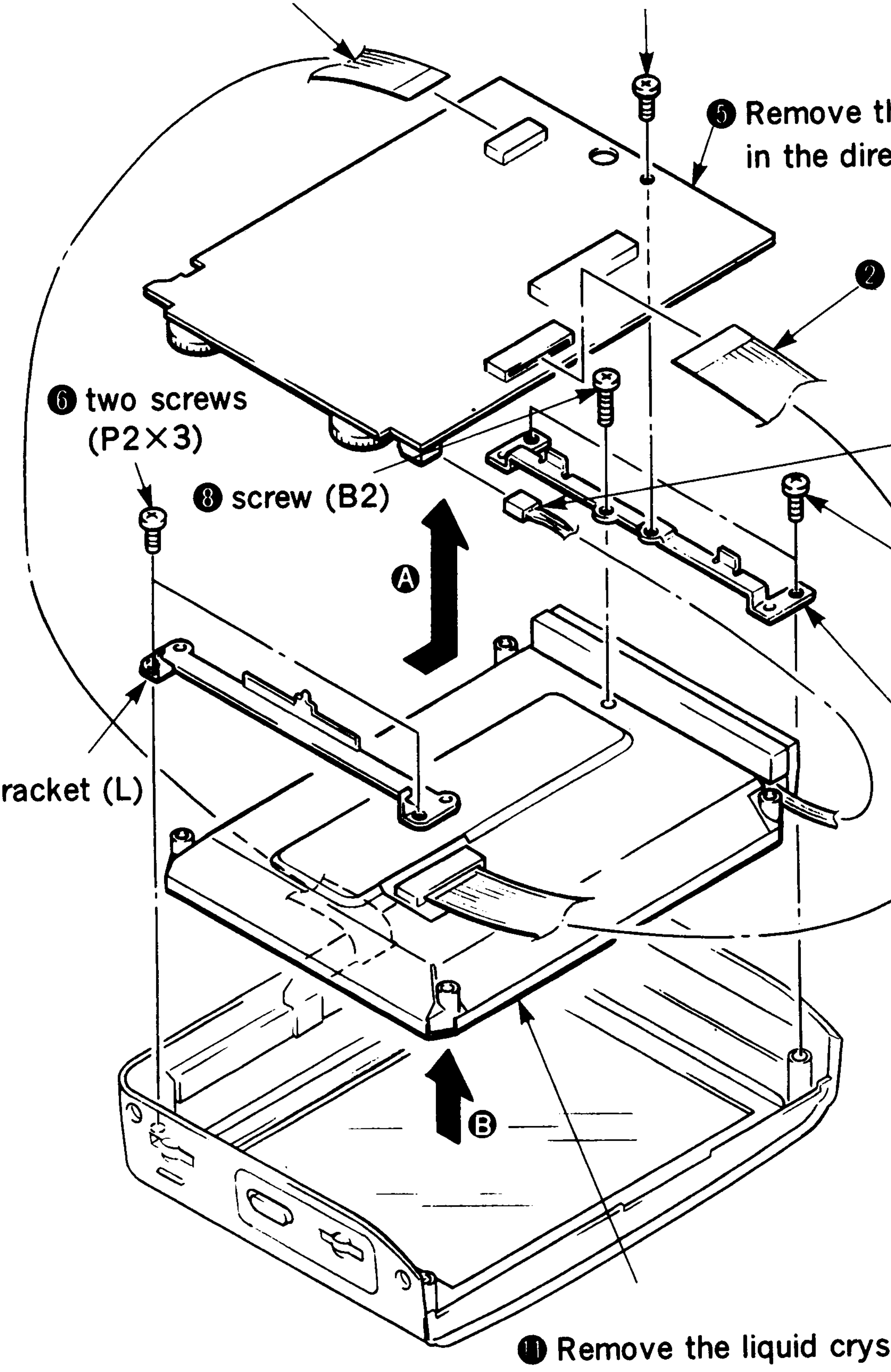
❷ Remove the SC unit in the direction of arrow.

❶ two screws (M2×4)

❶ two screws (M2×4)

❸ FP-271 flexible board to RG-8 board (CN001 26P)

2-3. REMOVAL OF LIQUID CRYSTAL DISPLAY MODULE



❶ flexible to RG-8 board (CN501 60P)

❹ screw (P2×3)

❺ Remove the RG-8 board in the direction of arrow Ⓐ.

❷ flat cable to RG-8 board (CN002 16P)

❻ two screws (P2×3)

❽ screw (B2)

❸ Connector to RG-8 board (CN901 3P)

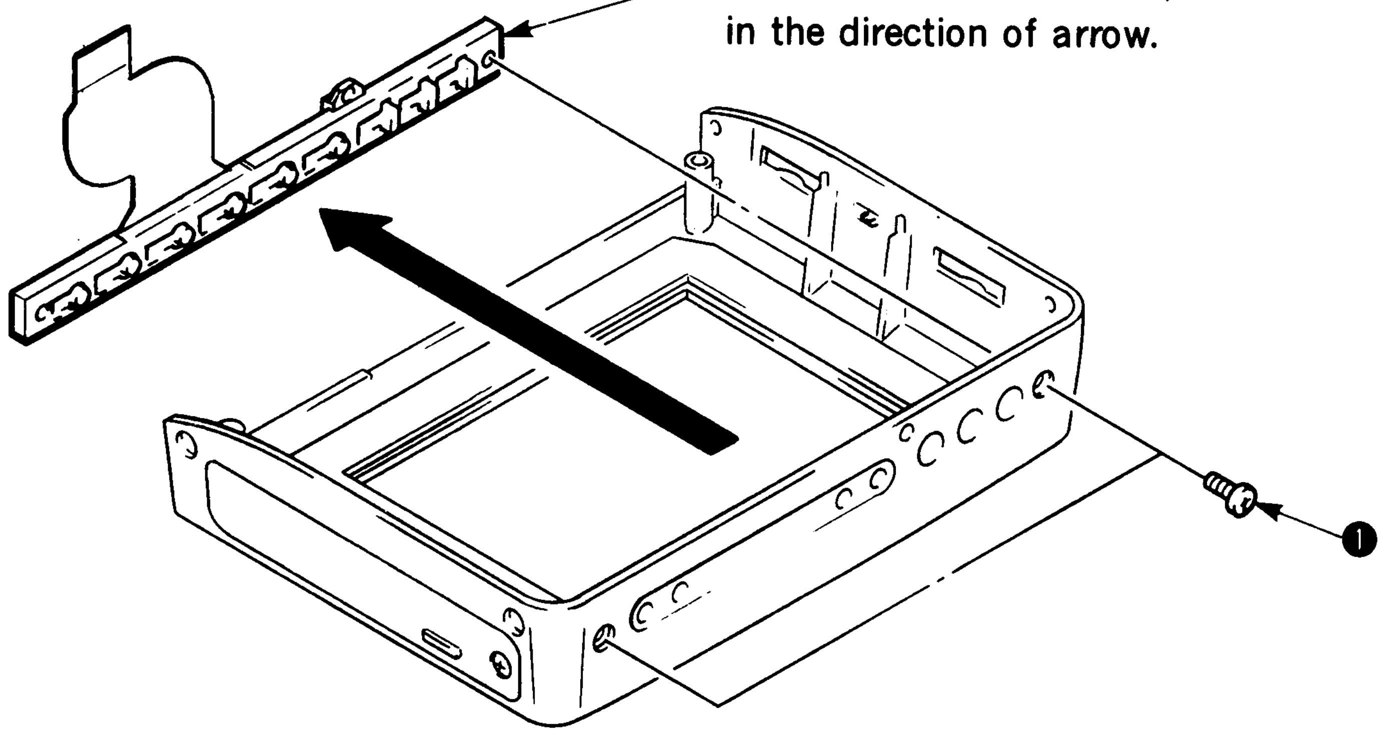
❾ two screws (P2×3)

❼ LCD bracket (R)

❼ LCD bracket (L)

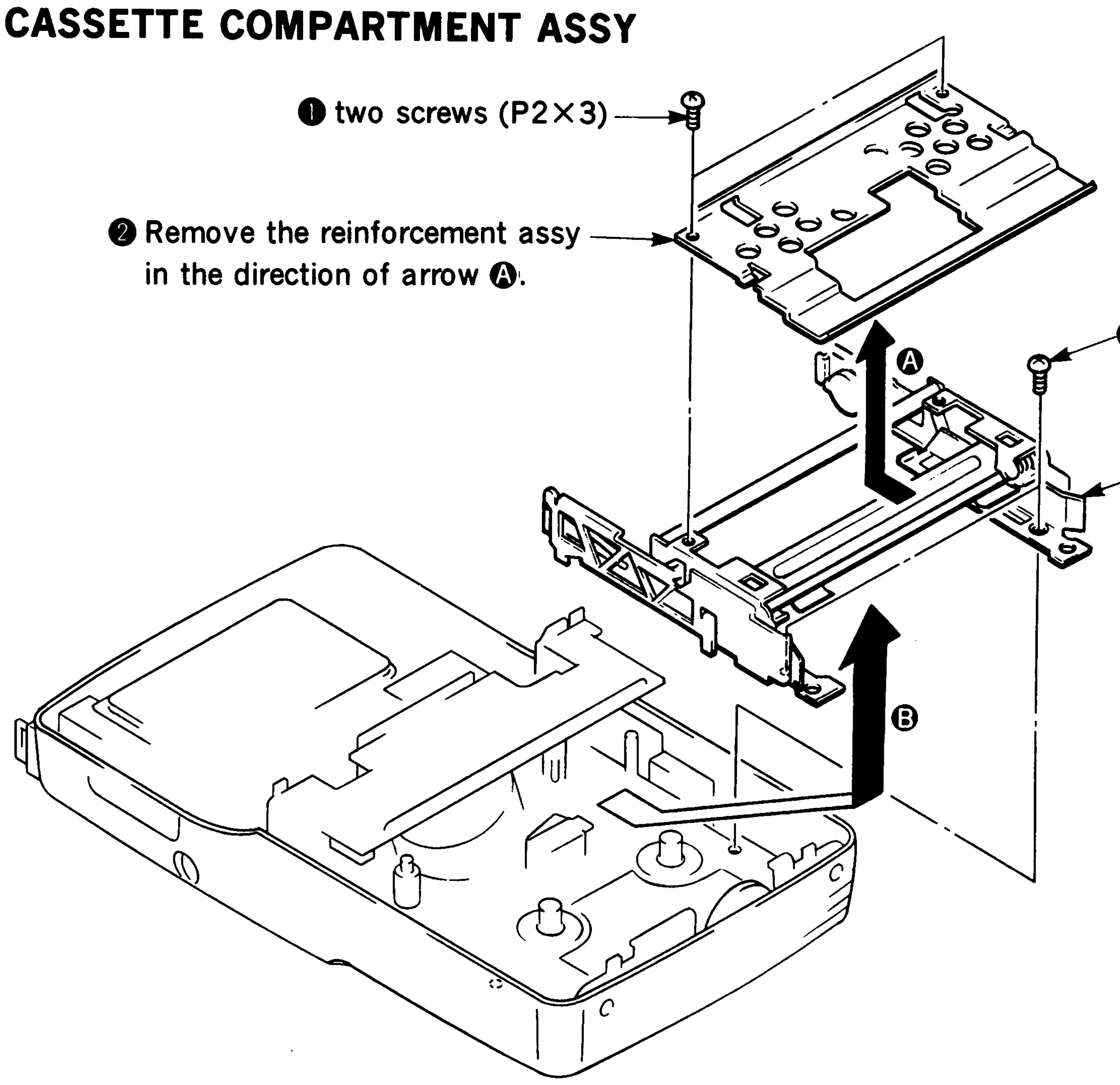
❿ Remove the liquid crystal display module in the direction of arrow Ⓑ.

2-4. REMOVAL OF CONTROL SWITCH BLOCK


❶ two screws (M2×4)

❷ Remove the switch block, control in the direction of arrow.

2-5. REMOVAL OF CASSETTE COMPARTMENT ASSY

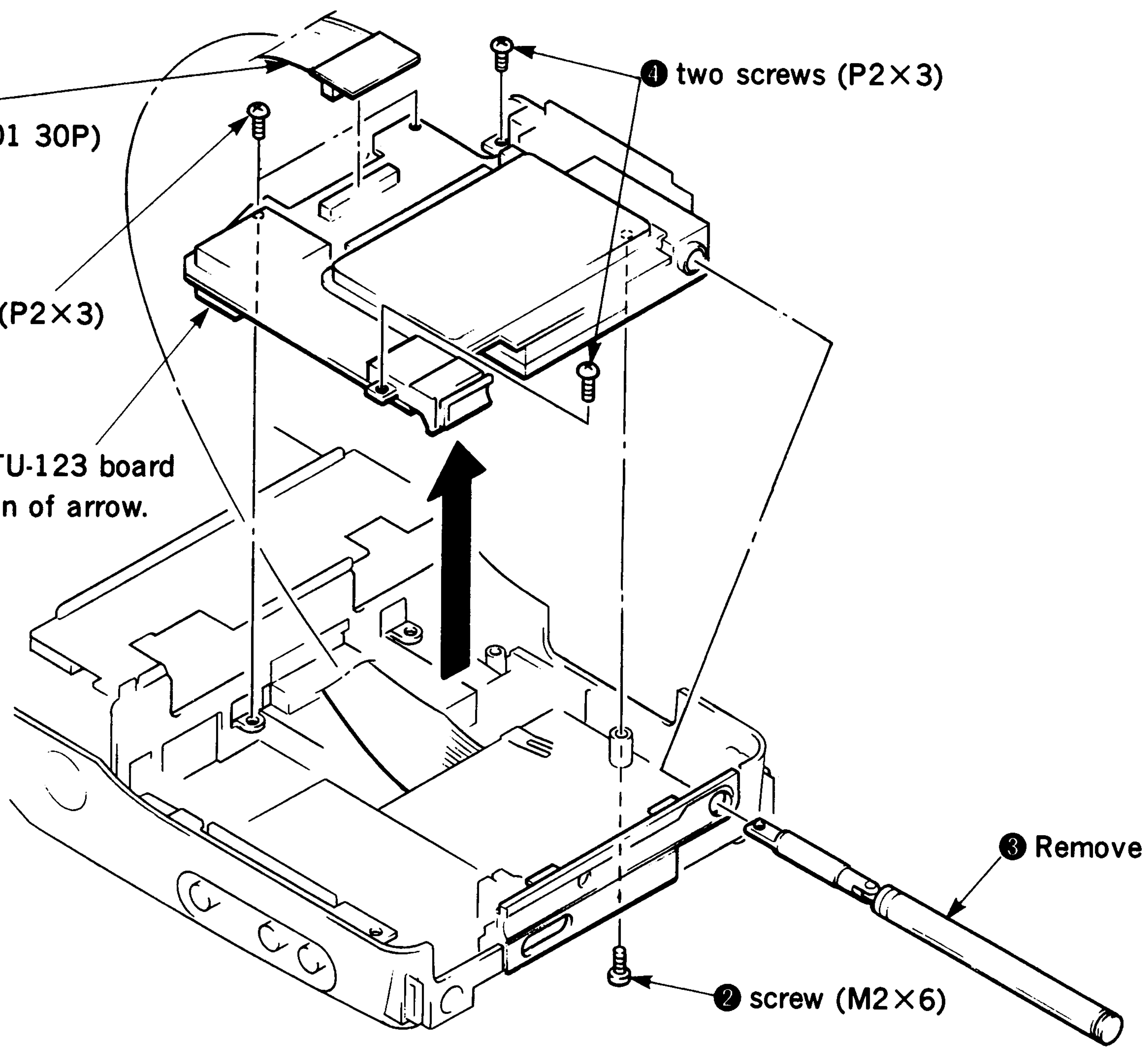

❶ two screws (P2×3)

❷ Remove the reinforcement assy in the direction of arrow Ⓐ.

❸ two screws (P2×3)

❹ Remove the cassette compartment assy in the direction of arrow Ⓑ.

2-6. REMOVAL OF TU-123 BOARD


❶ flexible board to TU-123 board (CN001 30P)

❷ screw (M2×6)

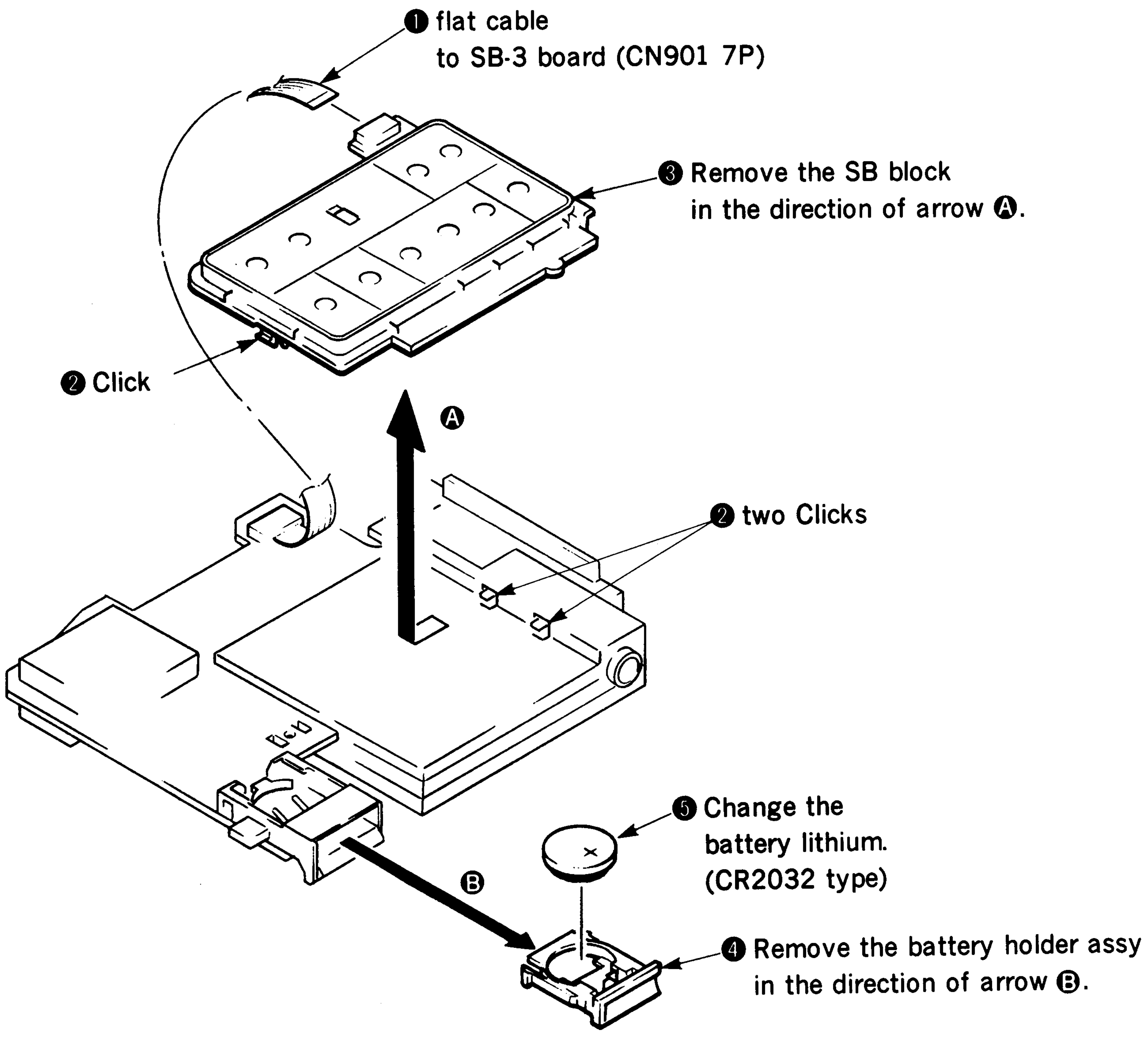
❸ Remove the antenna telescopic

❹ two screws (P2×3)

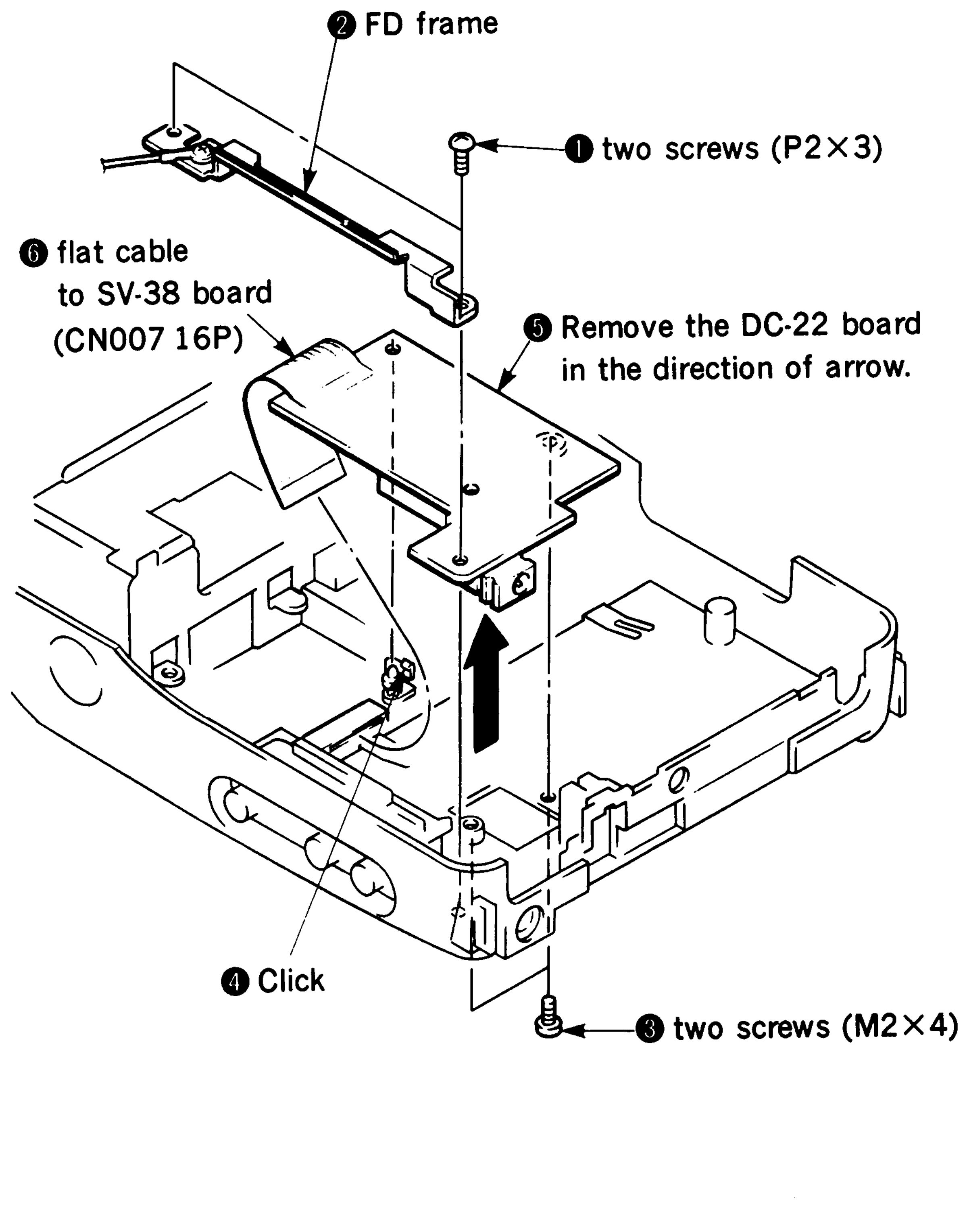
❹ two screws (P2×3)

❺ Remove the TU-123 board in the direction of arrow.

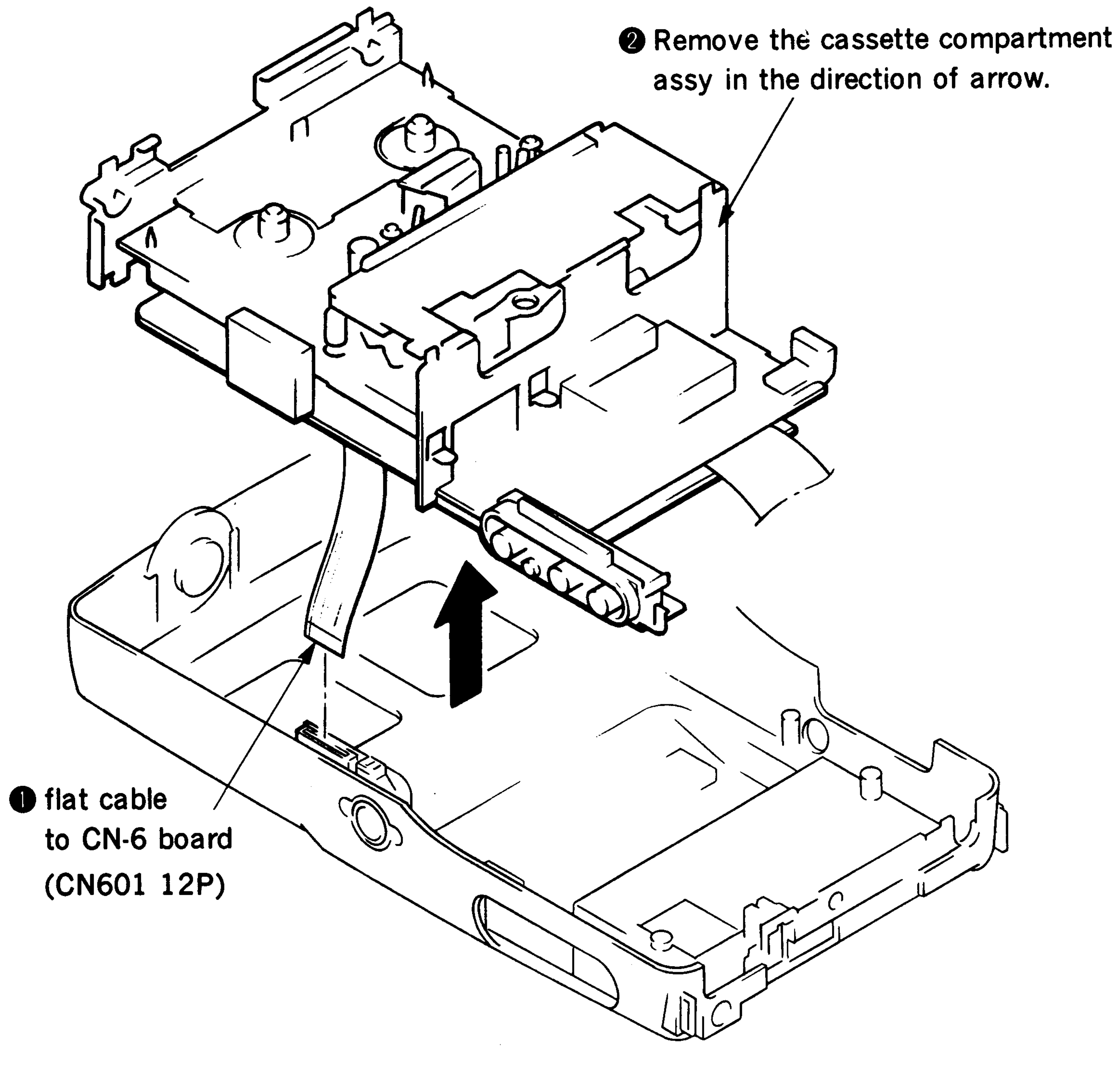
2-7. REMOVAL OF SB BLOCK AND LITHIUM BATTERY


❶ flat cable
to SB-3 board (CN901 7P)
❸ Remove the SB block
in the direction of arrow Ⓐ.
❷ Click
Ⓐ
❷ two Clicks
❺ Change the
battery lithium.
(CR2032 type)
Ⓑ
❹ Remove the battery holder assy
in the direction of arrow Ⓑ.

2-8. REMOVAL OF DC-22 BOARD


❷ FD frame
❶ two screws (P2×3)
❻ flat cable
to SV-38 board
(CN007 16P)
❺ Remove the DC-22 board
in the direction of arrow.
❹ Click
❸ two screws (M2×4)

2-9. REMOVAL OF MECHANISM DECK


❷ Remove the cassette compartment
assy in the direction of arrow.
❶ flat cable
to CN-6 board
(CN601 12P)

2-10. INTERNAL VIEWS

— UPPER —

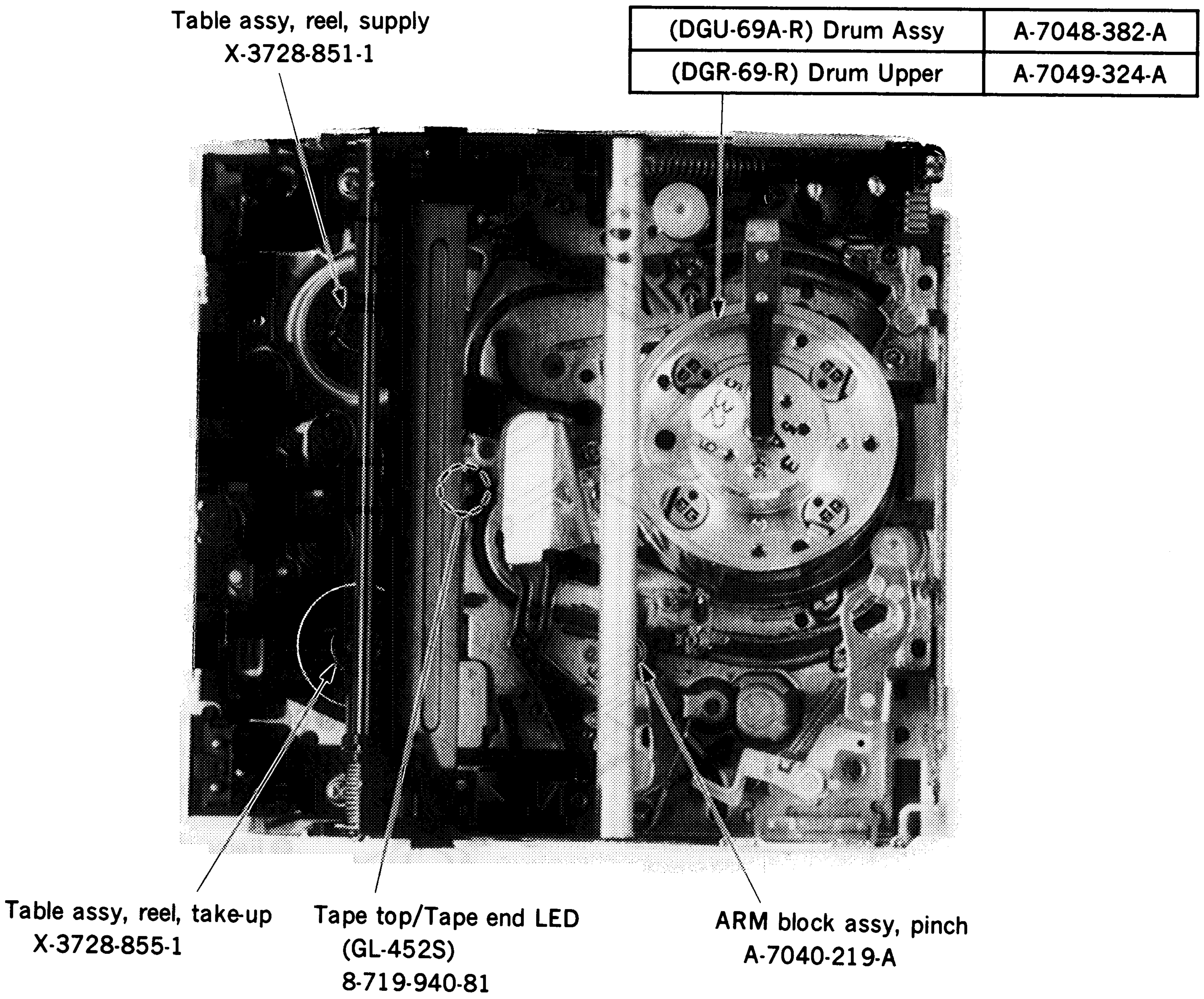
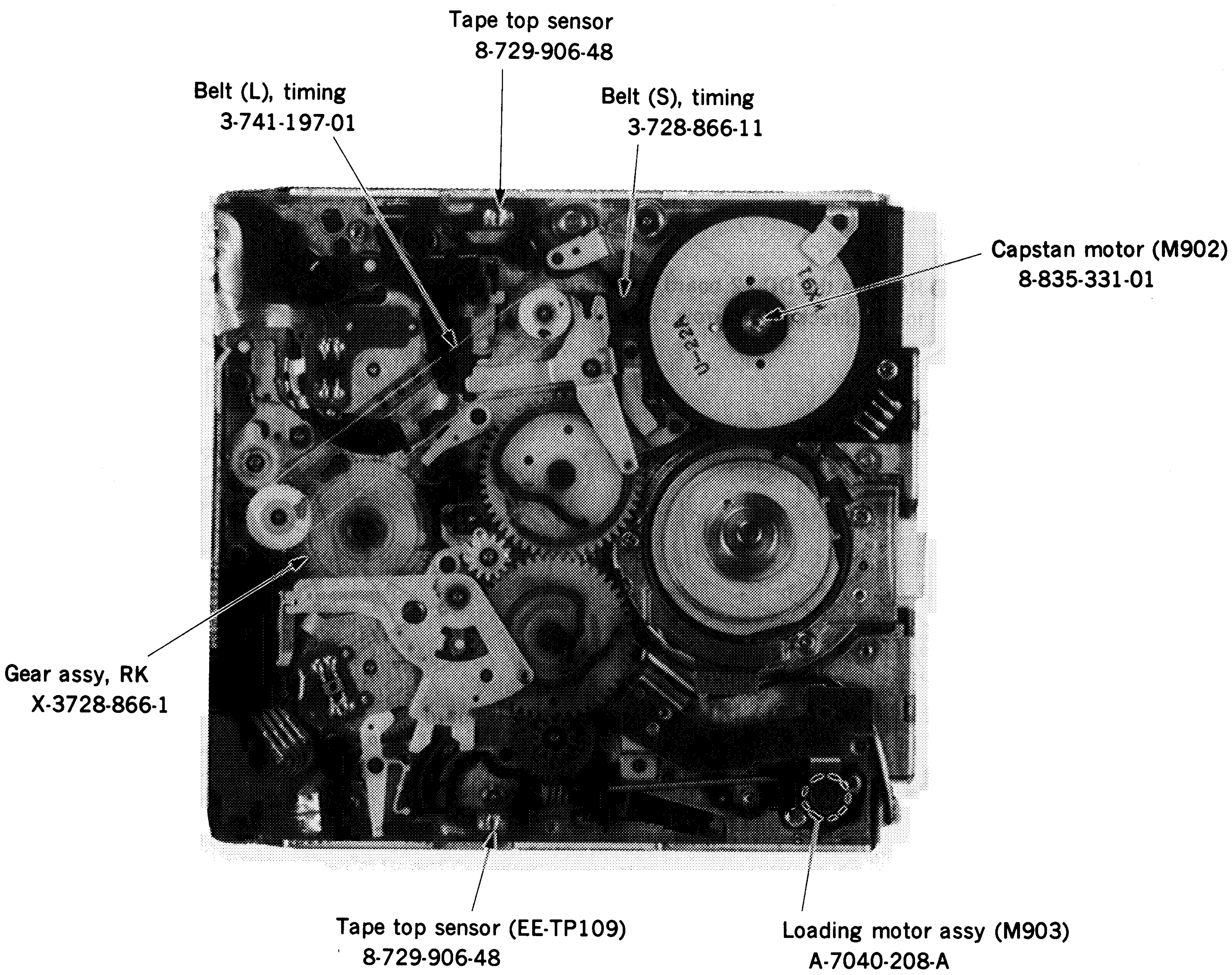


Table assy, reel, supply
X-3728-851-1
(DGU-69A-R) Drum Assy | A-7048-382-A
(DGR-69-R) Drum Upper | A-7049-324-A
Table assy, reel, take-up
X-3728-855-1
Tape top/Tape end LED
(GL-452S)
8-719-940-81
ARM block assy, pinch
A-7040-219-A

— LOWER —


Tape top sensor
8-729-906-48
Belt (L), timing
3-741-197-01
Belt (S), timing
3-728-866-11
Capstan motor (M902)
8-835-331-01
Gear assy, RK
X-3728-866-1
Tape top sensor (EE-TP109)
8-729-906-48
Loading motor assy (M903)
A-7040-208-A

⑦ VIDEO DATA ADJUSTMENT MODE

Short the TEST D (Solder the split land at the lower part of the KB-10 board Q803)

The following display is shown on the LCD.

VIDEO DATA

CFL1	1	(RESET)
CFL2	1	(DISPLAY)
NCL1	1	(SLEEP)
NCL2	1	(NEXT)
NCLP1	1	(UP)
NCLP2	1	(CLOCK)

KB-10 BOARD (Component Side)

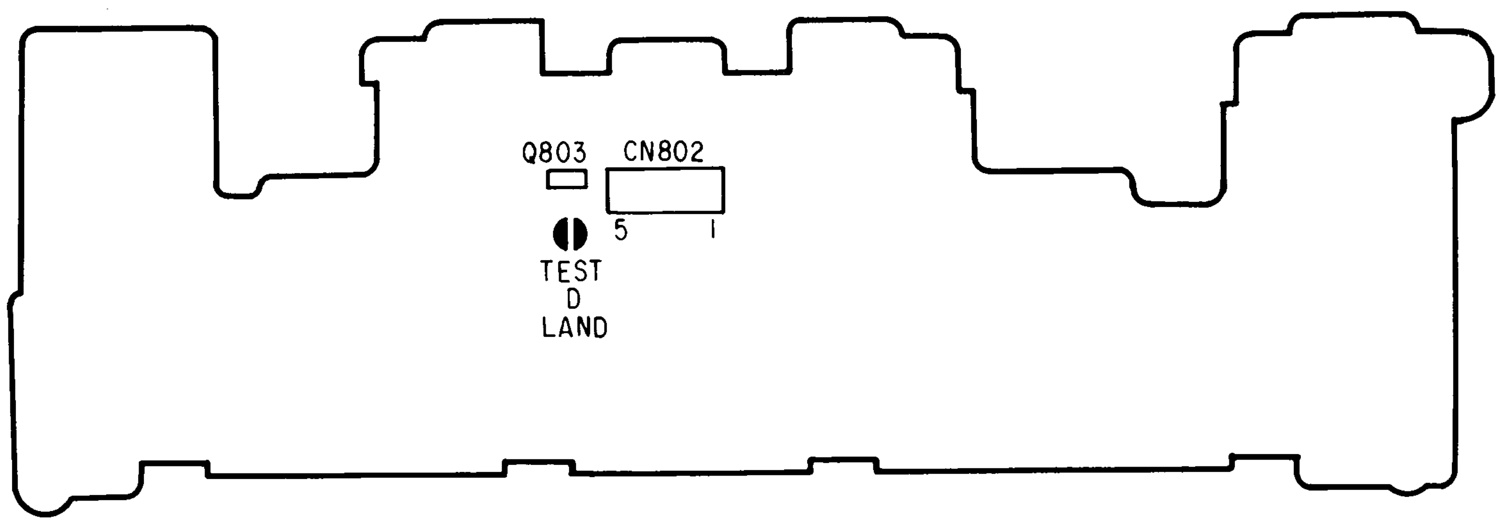


Fig3-2.

Six types of DATA are varied with the KEY on the SC part.

RESET ——→ COUNTER RESET KEY
DISPLAY ——→ DATA SCREEN KEY
SLEEP ——→ SLEEP KEY
NEXT ——→ NEXT KEY
UP ——→ + KEY
CLOCK ——→ CLOCK SET KEY

Pressing each KEY allows to rewrite DATA. ("0" is rewritten to "L", "1" is rewritten to "H".)
Eight modes are adjusted by the types of TAPE (ME, MP), recording (HI BAND, LO BAND) MODE, and TAPE SPEED (SP, LP).when the CH+KEY is pressed, the color of the display on the LCD turns to blue for few seconds from white and returns to white. The function to store the screen DATA in EEPROM is added by this operation. (See to the Table 3-1. for the data writing to EEPROM.)

Table 3-1. EE P ROM Write Data

TEST MODE						CFL1	CFL2	NCL1	NCL2	NCLP1	NCLP2
D	C	B	A	Switch position of the test mode set jig							
1	0	0	0	8	SP•MP	H	L	H	L	H	L
1	0	0	1	9	LP•MP	L	H	L	H	L	H
1	0	1	0	A	SP•ME	H	L	H	L	H	L
1	0	1	1	B	LP•ME	L	H	L	H	L	H
1	1	0	0	C	Hi-8 SP•MP	H	L	L	H	H	L
1	1	0	1	D	Hi-8 LP•MP	L	H	L	H	L	H
1	1	1	0	E	Hi-8 SP•ME	H	L	H	L	H	L
1	1	1	1	F	Hi-8 LP•ME	L	H	L	H	L	H

Note) When EEPROM is replaced, the following adjustment or write should be performed.

1. SW POSI adjustment
2. BATTERY DOWN adjustment
3. VIDEO DATA write
4. Channel preset

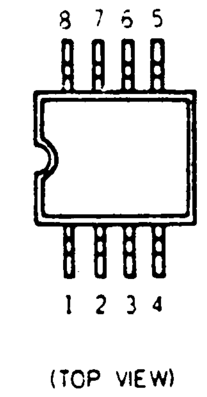
3-10. LIST OF SIRCS CODE (CATEGORY : VTR2)

CODE No.	CODE	COMMAND
01	00	CH-1/1
02	01	CH-2/2
03	02	CH-3/3
04	03	CH-4/4
05	04	CH-5/5
06	05	CH-6/6
07	06	CH-7/7
08	07	CH-8/8
09	08	CH-9/9
10	09	CH-10/0
11	0 A	CH-11/*
12	0 B	CH-12/CH/ENTER/#
13	0 C	CH-13/1−
14	0 D	CH-14/2−
17	10	CH-HIGH(+)
18	11	CH-LOW(−)
22	15	POWER ON/OFF
23	16	EJECT
24	17	MPX MAIN/SUB
25	18	STOP
26	19	PAUSE

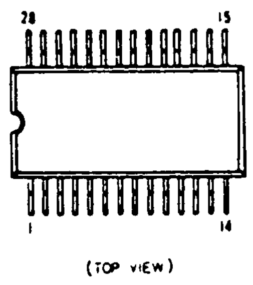
CODE No.	CODE	COMMAND
27	1 A	PB
28	1 B	REWIND
29	1 C	FF
30	1 D	REC
33	20	STILL
36	23	1/5 SLOW
47	2 E	POWER ON
48	2 F	POWER OFF
50	31	FORWARD
55	36	SLEEP
71	46	COUNTER RESET
72	47	MEM CNTR ON/OFF
73	48	INDEX WRITE
74	49	INDEX ERASE
80	4F	INPUT SELECT
85	54	INDEX ON/OFF
89	58	SPEED CHANGE
91	5A	COUNTER DISPLAY ON/OFF
97	60	TIMER SET
98	61	NEXT
102	65	TIMER REC

4-3. SEMICONDUCTORS

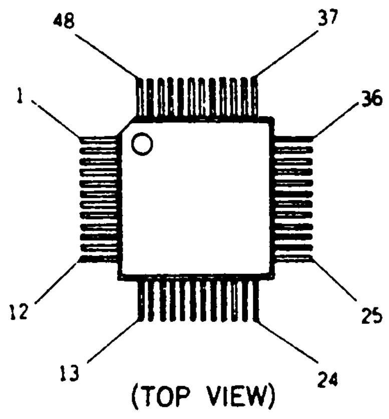
AK93C57F
FA7610N
LM311DR
LM358D
LM358PS
LM393DR
MC34182M
LM393ML
NJM2073M


8 7 6 5
1 2 3 4
(TOP VIEW)

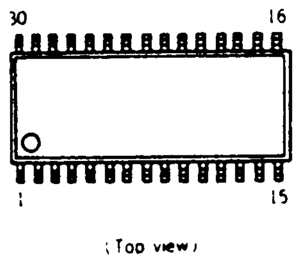
BA3570F
CXA1138M


28
15
1
14
(TOP VIEW)

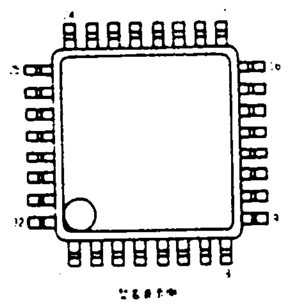
CXA1124AQ
CXA1208R
CXA1537R
MB606199


48
37
1
36
12
25
13
24
(TOP VIEW)

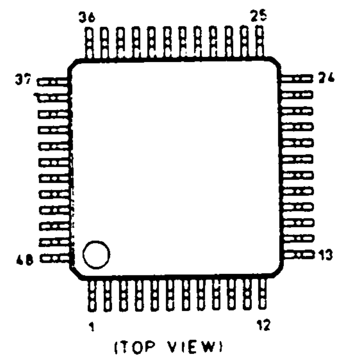
CXA1127M
CXA8006M


30
16
1
15
(Top view)

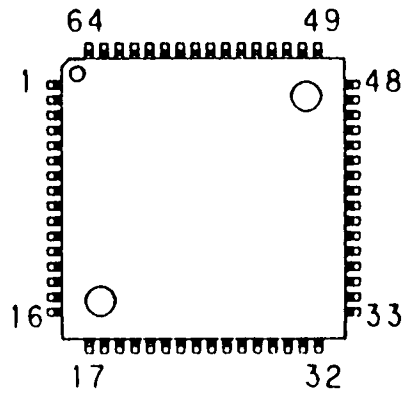
CXA1201Q



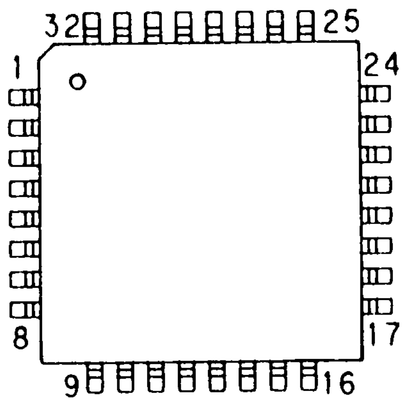
CXA1202R


36
25
37
24
48
13
1
12
(TOP VIEW)

CXA1207R


64
49
1
48
16
33
17
32

CXD2106Q


32
25
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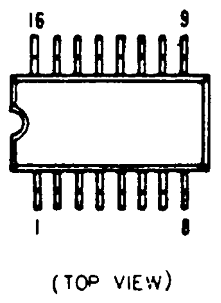
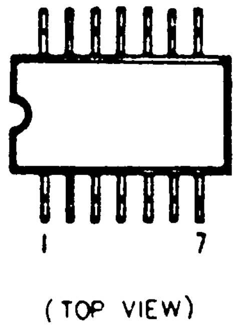
24
8
17
9
16

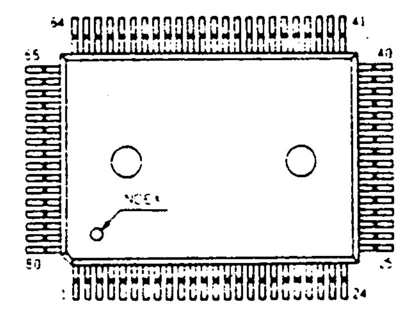
CXD2107M
CX20115A
MB3775PF
MC14053BF


16
9
1
8
(TOP VIEW)

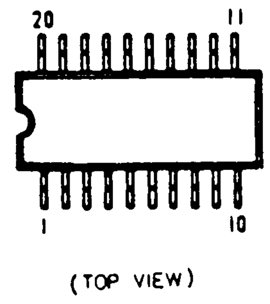
CXL5502M
μPC339G2
μPD6451AGT-601


14
8
1
7
(TOP VIEW)

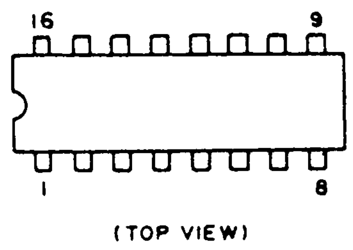
CXP50116
CXP80116
MC14094BF



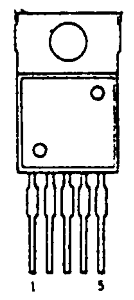
CX20102
M52018FP


20
11
1
10
(TOP VIEW)

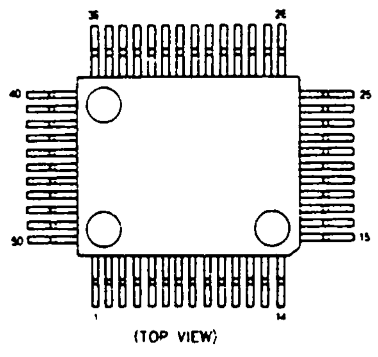
MC10H116M


16
9
1
8
(TOP VIEW)

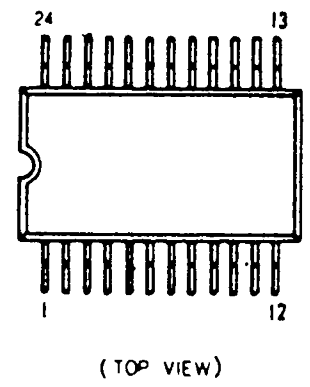
MC14052BF



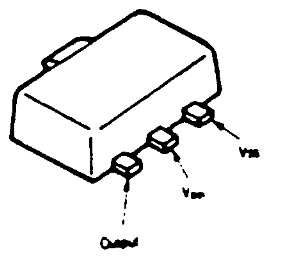
M51406FP



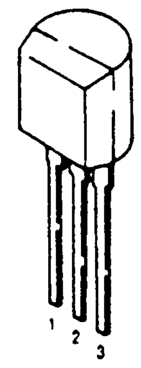
M52007FP


24
13
1
12
(TOP VIEW)

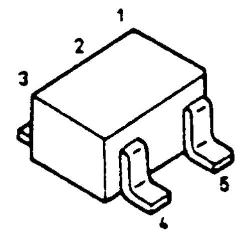
S-8052ALO-LG-S
S-8054-ALR-LN-S



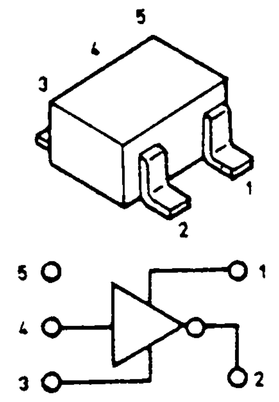
S-81350AG



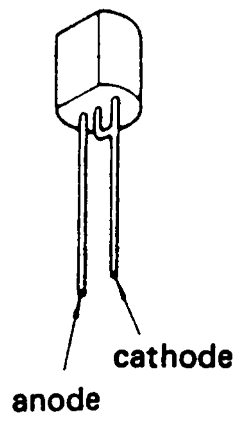
TC4SU69F
TC4S66F
TC4S81F



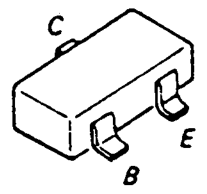
TC7S00F


5
4
3
1
2
5
4
3
1
2

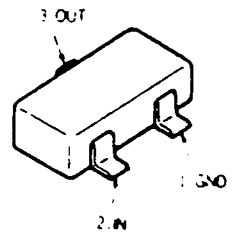
μPC574J


cathode
anode

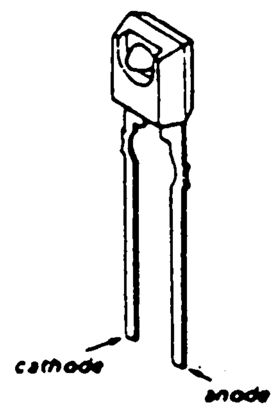
DTA114EK
DTA124EK
DTA143EK
DTA144EK
DTC114EK
DTC124EK
DTC144EK
2SA1037K
2SA1162
2SA1576
2SB624
2SC1623
2SC2412K
2SC3053
2SC3326N
2SC4081



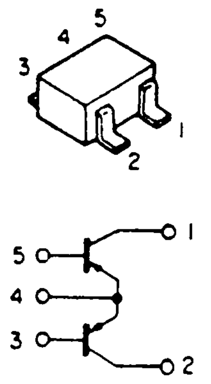
DTA114EU
DTA144EU
DTC124EU
DTC143EU
DTC144EU
DTC144TU
DTC144WU
2SD1119


3 OUT
1 GND
2 IN

EE-TP109


cathode
anode

FMS1
FMY3
FMY4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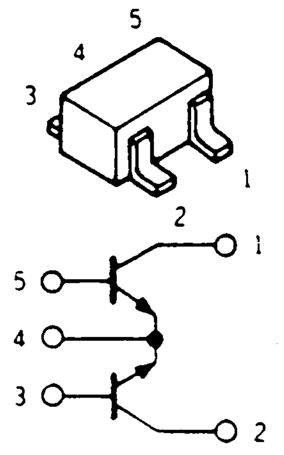
4
3
1
2
5
4
3
1
2

FMW1
FMW2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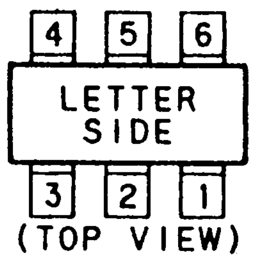
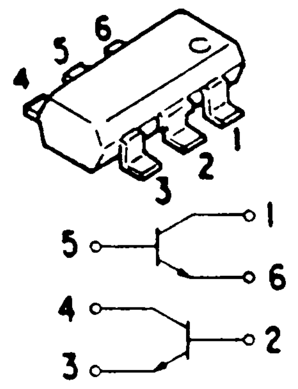
4
3
1
2
5
4
3
1
2

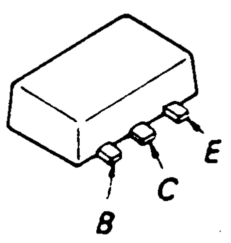
IMH2
IMX2


4
5
6
LETTER SIDE
3
2
1
(TOP VIEW)

XN4210


4
5
6
3
2
1
5
1
6
4
3
2

2SB1121



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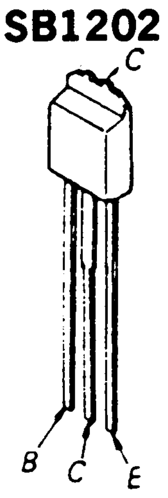

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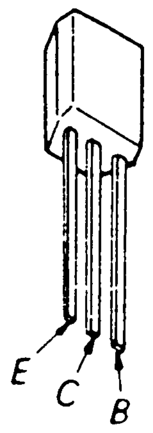
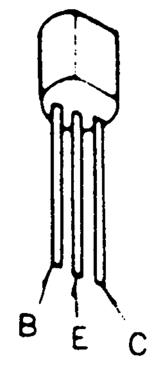


2SC3355



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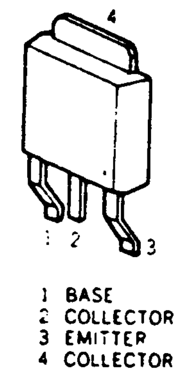
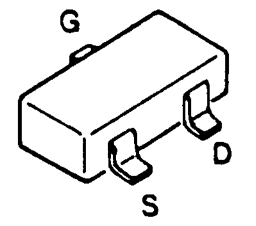
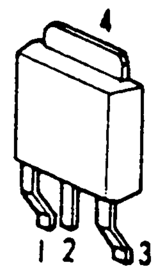

4
1
2
3
1 BASE
2 COLLECTOR
3 EMITTER
4 COLLECTOR

2SK209G

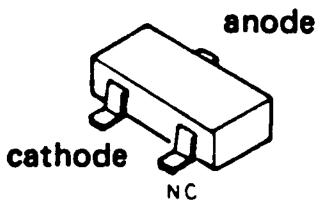


2SK1469

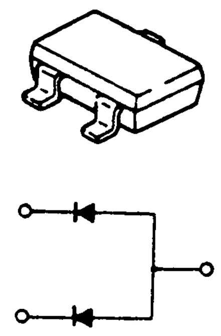


1. SOURCE
2. DRAIN
3. GATE
4. DRAIN

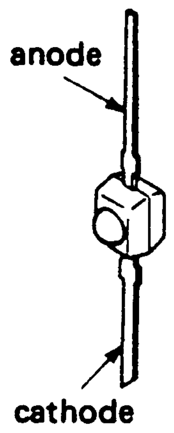
DAN202U


anode
cathode
NC

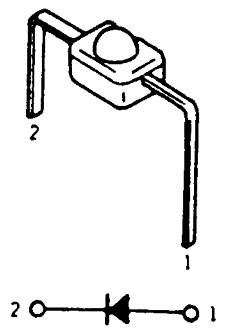
DAP202U



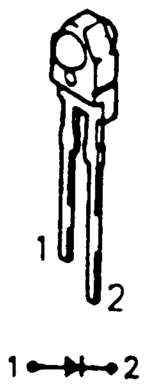
GL-1EG11


anode
cathode

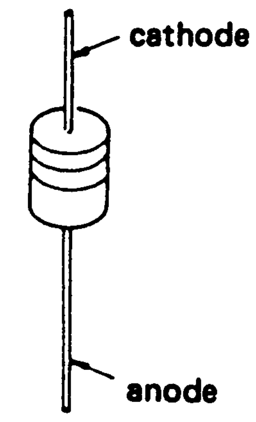
GL-1PR102



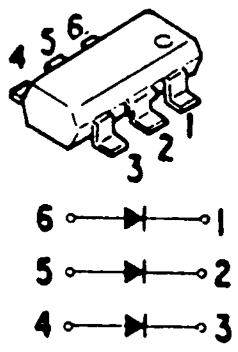
GL452S



HZS12A1L
1SS119


cathode
anode

IMN10
MA121


4
5
6
1
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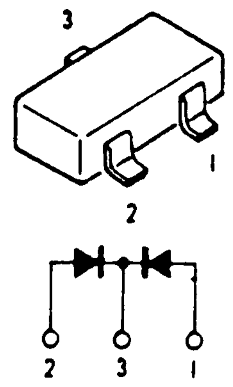
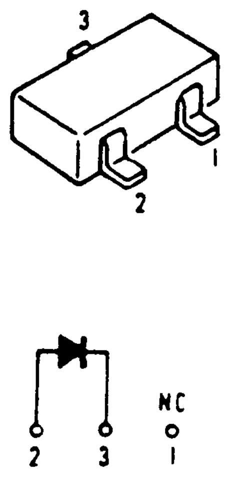
4
3

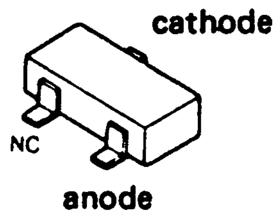
MA152WK



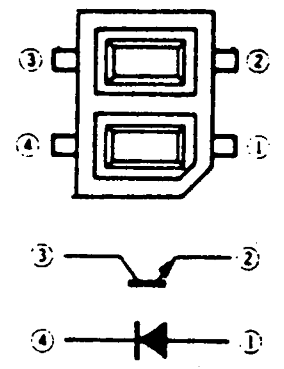
RD3.6M-B2
RD5.1M-B2
RD5.6M-B2
RD6.2M-B1
RD9.1M-B1
RD9.1M-B2
SB05-05CP



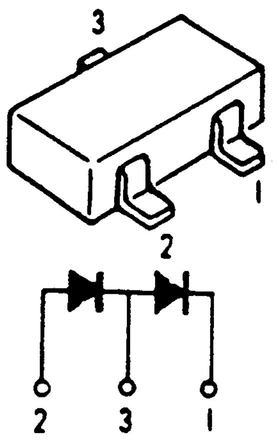
SB10-05CP


cathode
NC
anode

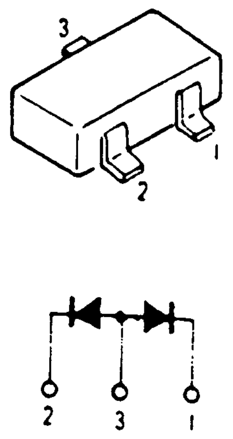
TLP-907



1SS226



1S2836



SECTION 5
EXPLODED VIEWS

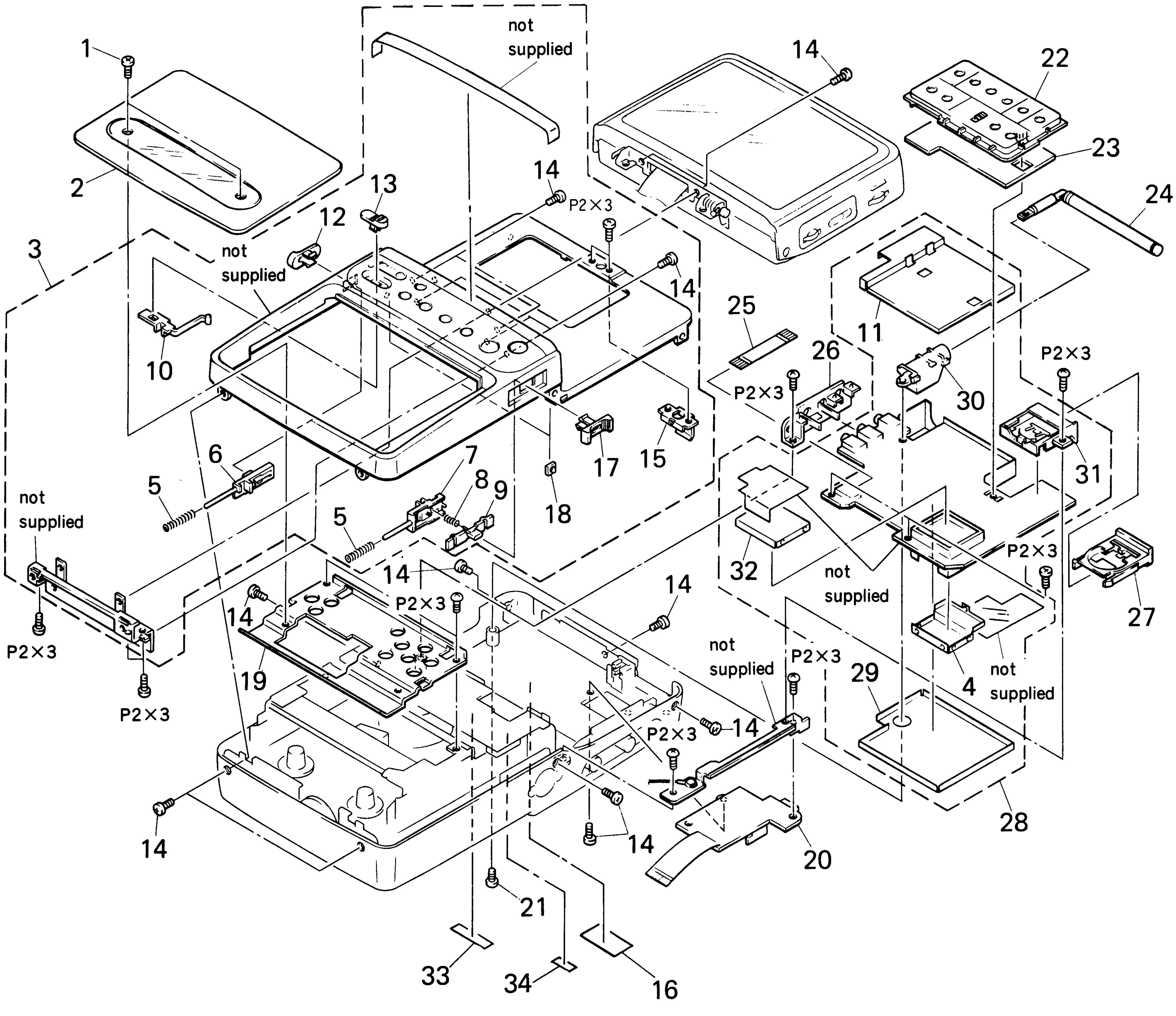
NOTE:

- The mechanical parts with no reference number in the exploded views are not supplied.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- The construction parts of an assembled part are indicated with a collation number in the remark column.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

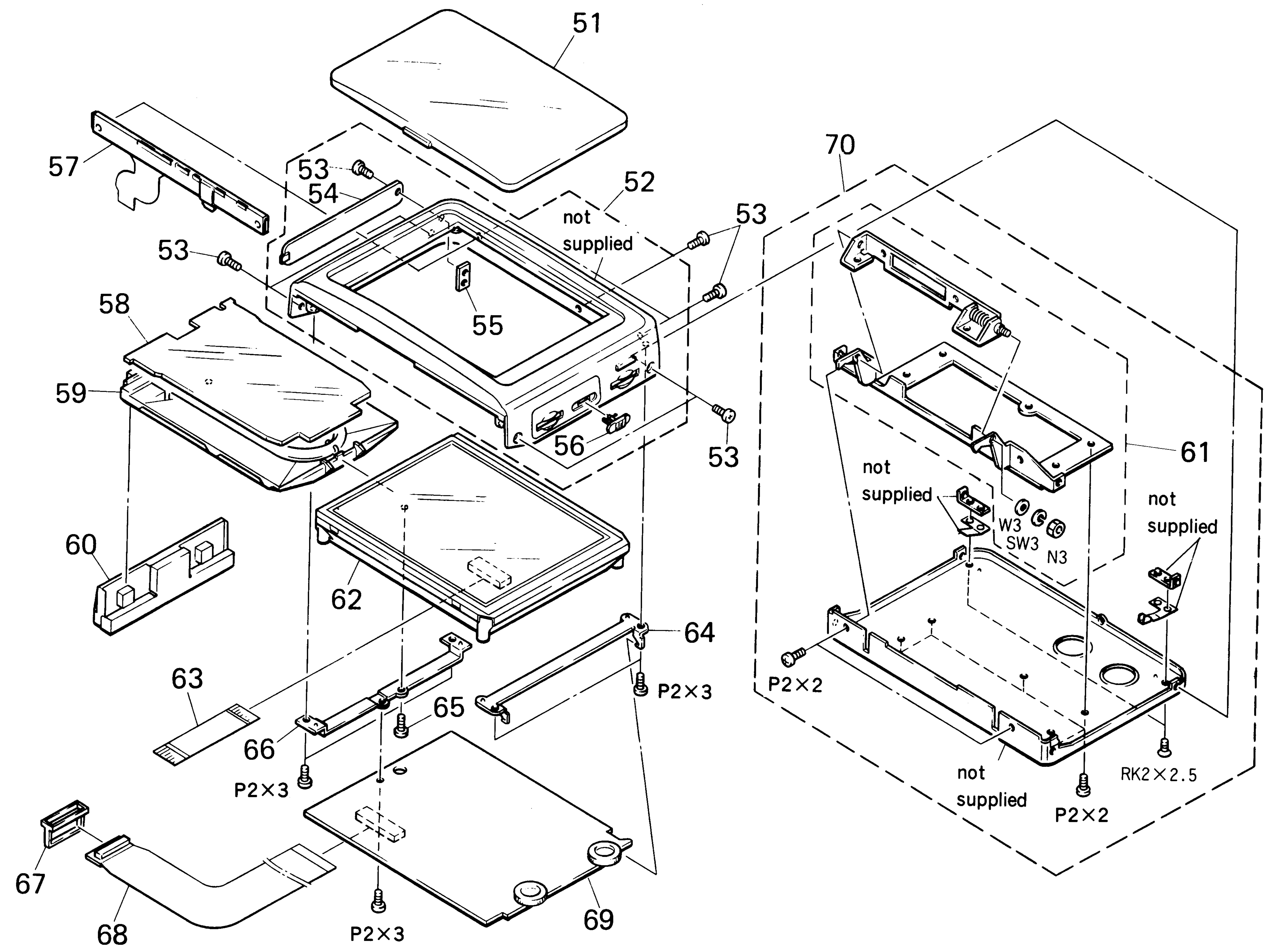
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifé.

5-1. CABINET (UPPER) ASSEMBLY



Ref.No	Part No.	Description	Remark
1	3-719-555-11	SCREW (M1.7X5.5)	
2	X-3728-871-1	LID ASSY, CASSETTE COMPARTMENT	
3	X-3749-097-1	CABINET ASSY, UPPER	5-10, 12-18
4	3-746-907-01	LID, TDD SHIELD CASE	
5	3-741-137-01	SPRING, COMPRESSION	
6	3-740-655-01	BUTTON, EJECT LOCK	
7	3-744-133-01	PLATE, SLIDE, POWER	
8	3-303-973-00	SPRING, COMPRESSION	
9	3-744-128-01	BUTTON, POWER LOCK	
10	3-744-132-01	PLATE, SLIDE, REC	
11	X-3728-886-1	LID ASSY, TU SHIELD CASE	
12	3-740-647-01	BUTTON, EJECT	
13	3-740-648-11	BUTTON, POWER	
14	3-719-381-01	SCREW (M2X4)	
15	X-3940-043-1	PLATE, LOCK ASSY	
16	*3-749-513-01	LABEL, MODEL NUMBER (U/C)	
17	3-744-131-01	BUTTON, POWER	
18	3-718-233-01	NUT, PLATE	
19	X-3728-890-1	REINFORCEMENT ASSY	
20	*A-7071-210-A	DC-22 (A) BOARD, COMPLETE	
21	3-719-381-21	SCREW (M2X6)	
22	X-3749-096-1	HOLDER ASSY, SB	
23	*1-634-346-11	SB-3 BOARD	
24	1-501-456-11	ANTENNA, TELESCOPIC	
25	1-575-856-11	CABLE,FLAT(1.0MM PITCH) 7 CORE	
26	3-744-165-01	COVER, HP JACK	
27	X-3728-883-1	HOLDER ASSY, BATTERY	
28	*A-7062-317-A	TU-123 BOARD, COMPLETE	4, 11, 29-32
29	3-746-915-01	LID, REAR, TU SHIELD CASE	
30	3-744-166-01	HOLDER, ANTENNA	
31	X-3728-887-1	GUIDE ASSY, BATTERY	
32	3-746-908-01	LID, REAR, TDD SHIELD CASE	
33	*3-704-386-01	LABEL, TELESONIC	
34	*3-704-367-01	LABEL	

5-2. SC UNIT ASSEMBLY

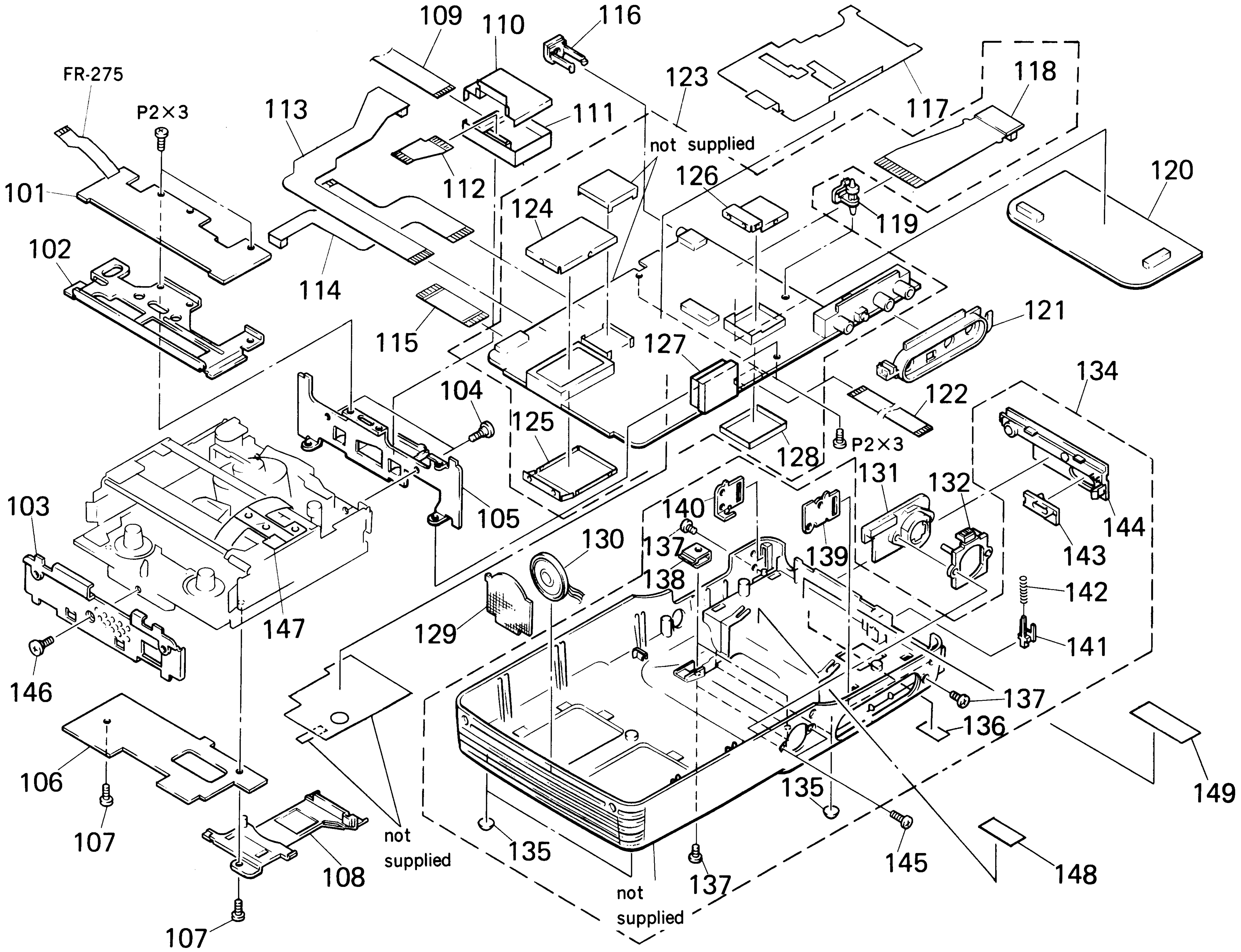

51
57
53
54
52
not supplied
53
70
53
58
55
59
56
53
61
not supplied
W3
SW3
N3
not supplied
60
62
64
P2×3
63
65
66
P2×3
P2×2
not supplied
RK2×2.5
P2×2
67
68
P2×3
69

Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Note:
Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No	Part No.	Description	Remark
51	3-744-142-01	WINDOW, SC	
52	X-3728-878-1	CABINET ASSY, UPPER, SC	
53	3-719-381-01	SCREW (M2X4)	
54	3-744-174-01	COVER, SIDE	
55	3-730-103-01	NUT, PLATE	
56	3-744-162-01	KNOB, DBB	
57	1-466-334-11	SWITCH BLOCK, CONTROL	
58	3-744-127-01	CURTAIN	
59	1-518-668-11	TUBE UNIT, FLUORECENT (BL901)	
60	⚠1-466-333-11	INVERTER UNIT, DC-AC	
61	X-3749-223-1	ARM, HINGE ASSY	
62	1-809-002-11	DISPLAY MODULE, LIQUID CRYSTAL (LCD 901)	
63	1-575-858-11	CABLE,FLAT(1.0MM PITCH)16 CORE (LCD FLEXIBLE)	
64	*3-744-198-01	BRACKET (R), LCD	
65	3-719-408-01	SCREW (B2), TAPPING, P3	
66	*3-744-199-01	BRACKET (L), LCD	
67	3-744-152-01	HOLDER, FPC	
68	1-634-994-11	FP-271 FLEXIBLE BOARD	
69	*A-7061-937-A	RG-8 BOARD, COMPLETE	
70	X-3728-882-1	CABINET (BOTTOM) ASSY, SC	61

5-3. CABINET (LOWER) ASSEMBLY



109
110
116
FR-275
P2×3
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not supplied
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148
137
not supplied
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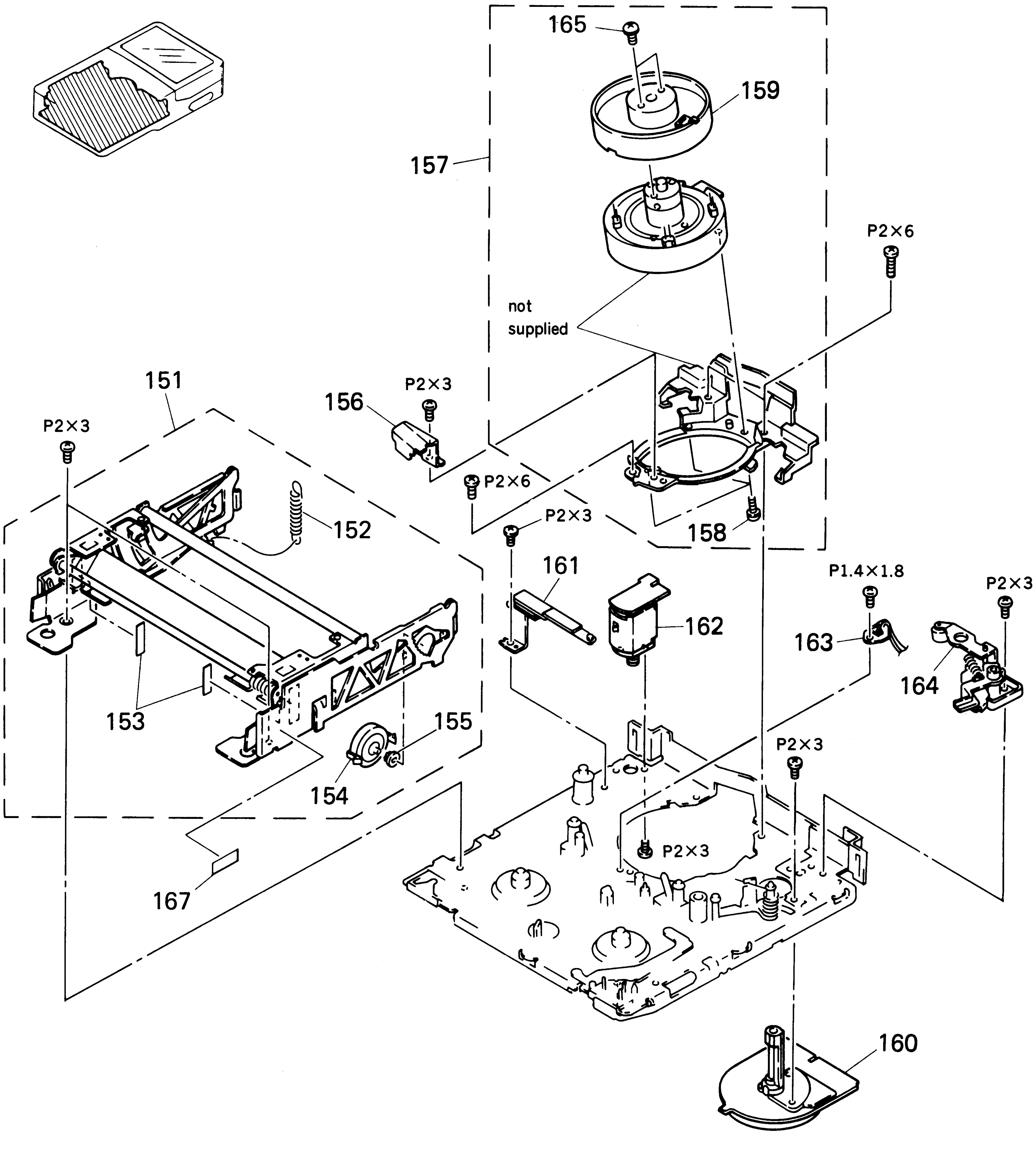
Ref.No	Part No.	Description	Remark
101	* A-7071-211-A	KB-10 (A) BOARD, COMPLETE	
102	X-3728-889-1	FRAME ASSY, KB	
103	X-3728-884-1	FRAME (FRONT) ASSY, MD	
104	3-732-791-11	SCREW (M2X3)	
105	X-3728-891-1	FRAME (REAR) ASSY, MD	
106	* 1-634-347-11	UC-6 BOARD	
107	3-719-408-01	SCREW (B2), TAPPING, P3	
108	* 3-744-176-01	COVER, MD	
109	1-634-992-11	FP-269 FLEXIBLE BOARD	
110	X-3728-885-1	LID ASSY, RP SHIELD CASE	
111	A-7061-932-A	RP-75 BOARD, COMPLETE	
112	1-634-996-11	FP-273 FLEXIBLE BOARD	
113	1-634-997-11	FP-274 FLEXIBLE BOARD	
114	1-634-995-11	FP-272 FLEXIBLE BOARD	
115	1-575-859-11	CABLE,FLAT(1.0MM PITCH)15 CORE	
116	3-744-169-01	COVER, CS JACK	
117	* 3-746-901-01	COVER, SV	
118	1-634-993-11	FP-270 FLEXIBLE BOARD	
119	3-742-816-01	SUPPORT (V), PC BOARD	
120	* A-7062-315-A	AU-53 (A) BOARD, COMPLETE	
121	3-744-175-01	COVER, IO JACK	
122	1-575-857-11	CABLE,FLAT(1.0MM PITCH)12 CORE	
123	* A-7062-316-A	SV-38 (A) BOARD, COMPLETE	118, 124-128
124	* 3-746-902-01	CASE (LID), SHIELD, SDD	
125	* X-3728-888-1	LID ASSY, REAR,SDD SHIELD CASE	
126	* 3-746-903-01	CASE (LID), SHIELD, INDEX	
127	A-7061-935-A	CC-32 BOARD, COMPLETE	
128	* X-3728-893-1	CASE (REAR LID) ASSY, SHIELD	
129	X-3728-892-1	SPACER ASSY, SP	
130	1-544-323-11	SPEAKER	
131	* 1-634-345-11	CN-6 BOARD	
132	3-744-157-01	SPACER, CN	
134	X-3749-098-1	CABINET ASSY, LOWER	135-144
135	3-740-607-01	CUSHION	
136	* 3-747-370-01	LABEL, BATTERY FITTING	
137	3-719-381-01	SCREW (M2X4)	
138	3-736-496-01	BRACKET, STAND	
139	3-744-156-01	HOOK (R), BELT	
140	3-744-155-01	HOOK (L), BELT	
141	3-744-159-01	LEVER, RELEASE	
142	3-564-951-00	SPRING, COMPRESSION	
143	3-744-161-01	KNOB, RELEASE	
144	3-744-168-01	COVER, ANTENNA	
145	3-719-381-21	SCREW (M2X6)	
146	3-744-603-11	SCREW	
147	3-746-960-01	RIBBON, LID RETAINER	
148	* 3-719-611-41	LABEL, FUSE RATING	
149	* 3-704-256-01	LABEL, CAUTION	

5-4. MECHANISM DECK ASSEMBLY (1)



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P2×6
not supplied
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P2×3
P2×3
152
P2×6
P2×3
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P1.4×1.8
P2×3
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154
P2×3
P2×3
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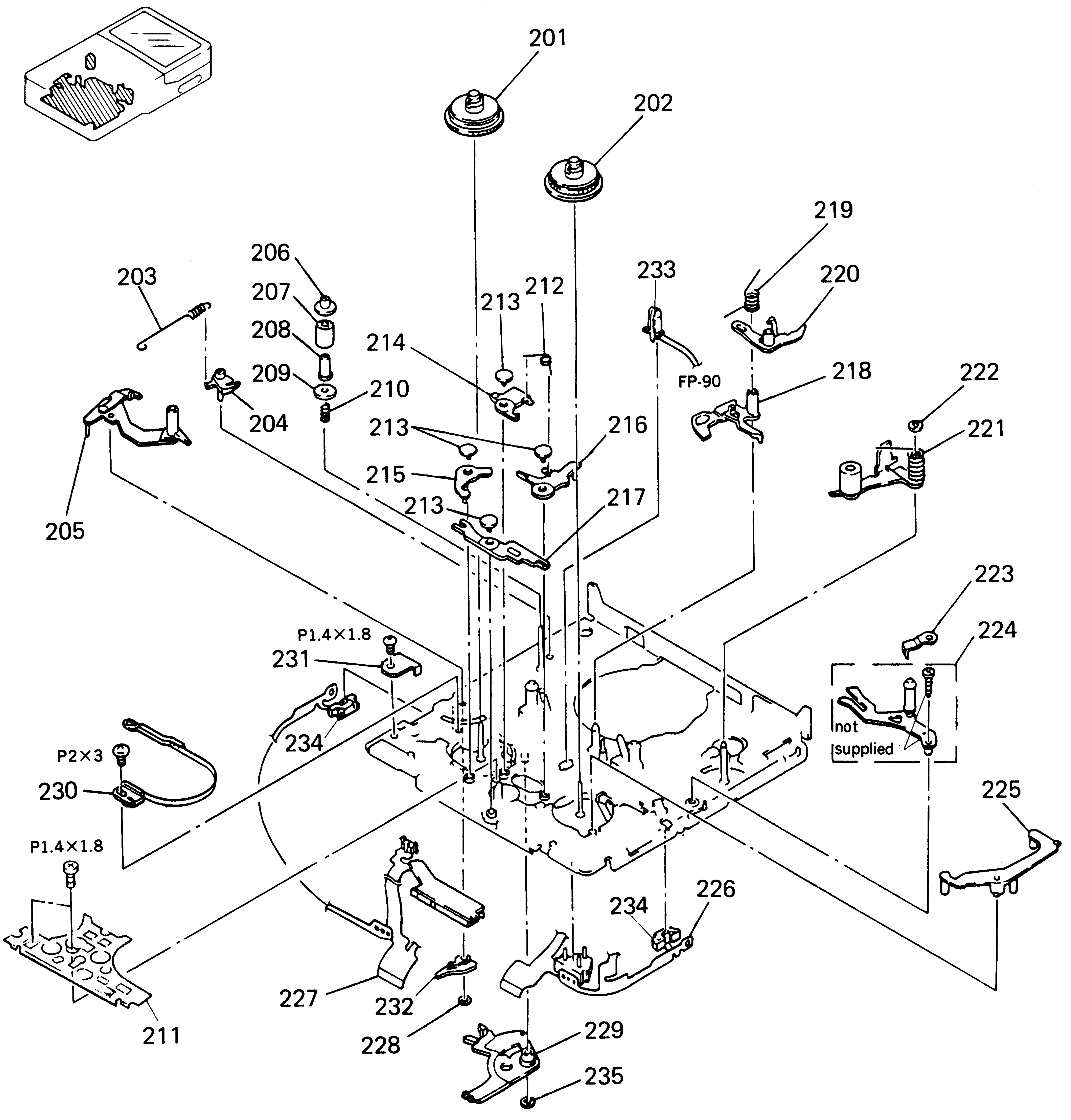
Ref.No	Part No.	Description	Remark
151	X-3728-873-1	CASSETTE COMPARTMENT ASSY	152-155
152	3-728-825-03	SPRING, TENSION	
153	*3-728-829-01	TAPE	
154	3-728-867-02	DAMPER, OIL	
155	3-728-828-02	GEAR, DAMPER	
156	3-728-868-01	GUARD, GUIDE	
157	A-7048-382-A	DRUM ASSY, (DGU-69A-R)	158, 159, 165
158	3-686-493-01	SCREW, (M2X5), P1	
159	A-7049-324-A	DRUM ASSY, ROTARY (UPPER)(DGR-69-R)	
160	8-835-331-01	MOTOR, DC U-22A (CAPSTAN)(M902)	
161	X-3728-864-1	GROUND ASSY, SHAFT	
162	A-7040-208-A	MOTOR ASSY, THREADING (LOADING) (M903)	
163	1-808-505-12	SENSOR (DEW)	
164	A-7040-207-A	ROLLER BLOCK ASSY, HC	
165	3-727-847-01	SCREW (M2X4)	
167	*3-730-176-01	SHEET, MD	

5-5. MECHANISM DECK ASSEMBLY (2)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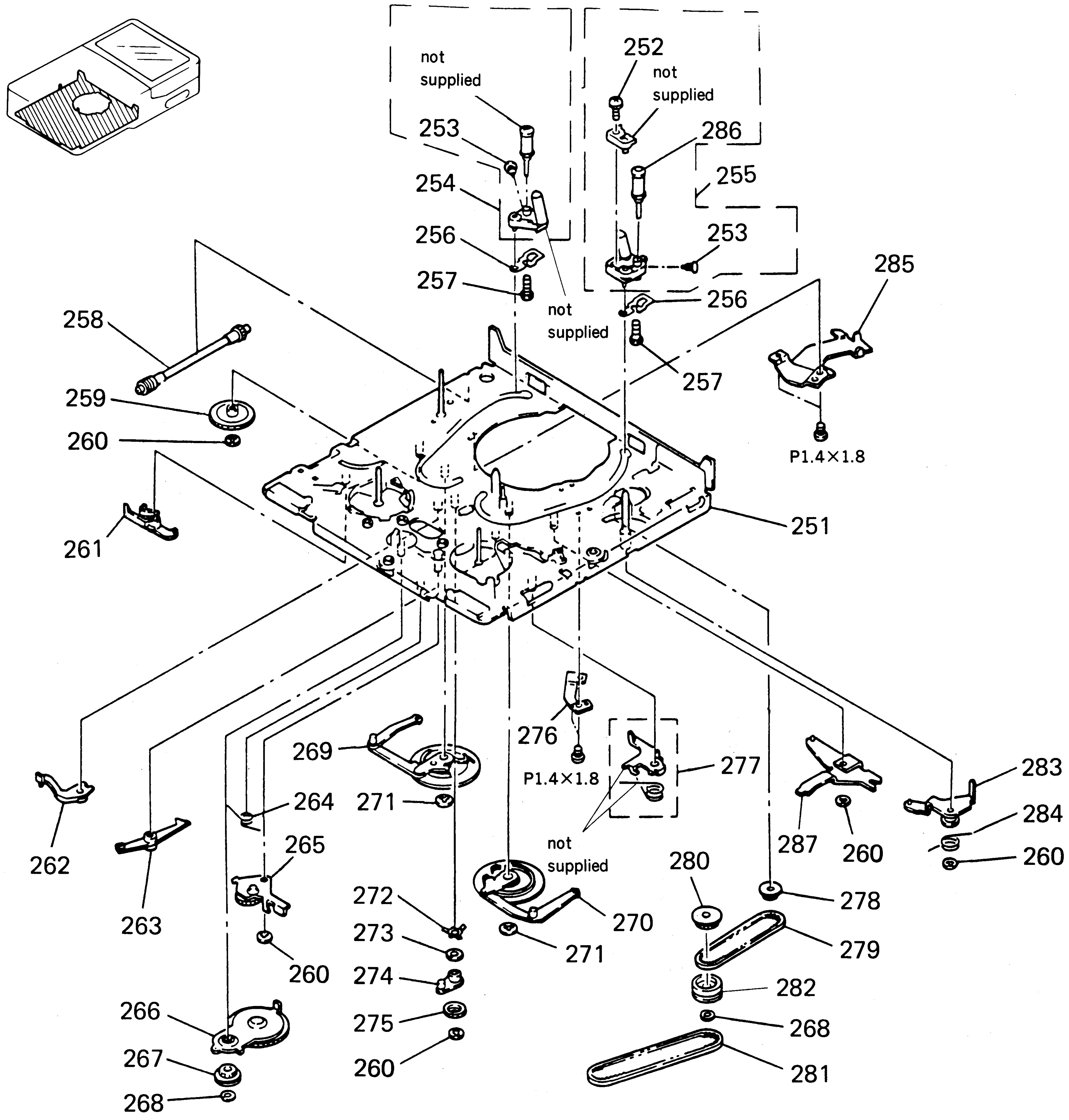
FP-90
P1.4×1.8
P2×3
not supplied

Ref.No	Part No.	Description	Remark
201	X-3728-851-1	TABLE ASSY, REEL, S	
202	X-3728-855-1	TABLE ASSY, REEL, T	
203	3-736-414-01	SPRING, TENSION	
204	3-728-855-03	ARM, ADJUSTMENT	
205	X-3728-867-1	ARM ASSY (S),TENSION REGULATOR	
206	3-726-884-01	FLANGE, UPPER, TG2	
207	3-726-883-01	ROLLER, TG2	
208	3-726-885-01	SLEEVE, TG2	
209	3-726-882-02	FLANGE, LOWER, TG2	
210	3-726-886-01	SPRING, COMPRESSION	
211	3-741-195-01	PLATE, BLIND, RK	
212	3-726-866-01	SPRING (ST), TORSION	
213	3-726-858-01	PIN, SHAFT RETAINER	
214	3-728-849-01	BRAKE, S	
215	3-726-852-01	BRAKE, LB	
216	3-728-850-01	BRAKE, T	
217	3-726-853-01	LEVER, LB	
218	3-728-875-01	STOPPER, RK	
219	3-726-864-01	SPRING (RK), TORSION	
220	3-728-852-02	ARM, RK STOPPER	
221	A-7040-219-A	ARM BLOCK ASSY, PINCH	
222	3-669-465-00	WASHER (1.5), STOPPER	
223	3-728-808-01	SPRING, LEAF	
224	X-3728-869-1	ARM ASSY, TG7	
225	3-728-848-01	ARM, LB RELEASE	
226	1-628-061-12	FP-90 FLEXIBLE BOARD	
227	1-628-060-12	FP-89 FLEXIBLE BOARD	
228	3-321-393-11	WASHER, STOPPER	
229	X-3728-863-1	LEVER ASSY, SW	
230	X-3728-859-1	BAND ASSY, TENSION REGULATOR	
231	3-730-125-01	RETAINER, SW	
232	X-3728-857-1	STOPPER ASSY,TENSION REGULATOR	
233	3-728-837-01	HOLDER, LED	
234	3-728-869-02	HOLDER, SENSOR	
235	3-726-829-01	WASHER, STOPPER	

5-6. MECHANISM DECK ASSEMBLY (3)


not supplied
253
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not supplied
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257
not supplied
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P1.4×1.8
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P1.4×1.8
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not supplied
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Ref.No	Part No.	Description	Remark
251	X-3728-862-1	CHASSIS ASSY, MECHANICAL	
252	3-736-473-01	SCREW (M2X0.25)(THREE LOCK)	
253	3-726-822-01	SCREW (M1.4X2) (STEP), HEAD	
254	A-7040-204-A	COASTER (LEFT) BLOCK ASSY	253
255	A-7040-215-A	COASTER (RIGHT)BLOCK ASSY(N1S)	252, 253, 286
256	3-736-485-01	SPRING, LEAF, COSTER	
257	3-726-830-01	SCREW (M1.4X4) (THREE LOCK)	
258	X-3728-868-1	WORM ASSY	
259	3-744-109-01	GEAR, WHEEL	
260	3-726-829-01	WASHER, STOPPER	
261	3-728-842-01	LEVER, EJECT	
262	3-728-851-01	BRAKE, UL	
263	3-726-854-01	ARM, BRAKE RELEASE	
264	3-726-865-01	SPRING (LB), TORSION	
265	A-7040-225-A	GEAR BLOCK ASSY (N), LB	
266	X-3728-866-1	GEAR ASSY, RK	
267	X-3728-858-1	GEAR ASSY, RC	
268	3-321-393-11	WASHER, STOPPER	
269	X-3728-842-1	GEAR (LEFT) ASSY, DRIVE	
270	X-3728-843-1	GEAR (RIGHT) ASSY, DRIVE	
271	3-669-465-00	WASHER (1.5), STOPPER	
272	3-726-867-01	SPRING, LEAF	
273	3-701-436-21	WASHER, POLYEHTHYLENE	
274	3-726-857-02	ARM, UL	
275	3-726-856-02	GEAR, UL	
276	*3-726-805-01	REINFORCEMENT (TT)	
277	X-3726-808-2	BRAKE ASSY, TS	
278	X-3726-805-1	GEAR ASSY, JOINT	
279	3-728-866-11	BELT (S), TIMING	
280	X-3726-838-1	PULLEY (UPPER) ASSY, MIDWAY	
281	3-741-197-01	BELT (L), TIMING	
282	3-741-196-01	PULLEY (LOWER), BELT MIDWAY	
283	X-3726-824-1	ARM ASSY, PINCH SUB	
284	3-726-895-01	SPRING	
285	X-3726-841-1	REINFORCEMENT (SS) ASSY	
286	X-3728-808-1	ROLLER ASSY (U) (SUS), GUIDE	
287	X-3728-846-1	LEVER ASSY, THREADING	

SECTION 6
ELECTRICAL PARTS LIST

RP-75

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA...,
UPC...: μPC, UPD...: μPD...

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiques pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description			Remark
	A-7061-932-A	RP-75 BOARD, COMPLETE ******************			(Ref. No. 1000 series)
	1-634-992-11	FP-269 FLEXIBLE BOARD			
		CAPACITOR			
C501	1-135-180-21	TANTAL CHIP	3.3MF	20%	6.3V
C502	1-164-361-11	CERAMIC CHIP	0.047MF		16V
C503	1-135-161-21	TANTAL CHIP	22MF	20%	10V
C504	1-164-361-11	CERAMIC CHIP	0.047MF		16V
C505	1-135-161-21	TANTAL CHIP	22MF	20%	10V
C506	1-164-361-11	CERAMIC CHIP	0.047MF		16V
C507	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C508	1-162-970-11	CERAMIC CHIP	0.01MF	10%	25V
C509	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C510	1-164-633-11	CERAMIC CHIP	0.1MF	10%	25V
C511	1-164-633-11	CERAMIC CHIP	0.1MF	10%	25V
C512	1-164-633-11	CERAMIC CHIP	0.1MF	10%	25V
C513	1-164-633-11	CERAMIC CHIP	0.1MF	10%	25V
C514	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C515	1-162-970-11	CERAMIC CHIP	0.01MF	10%	25V
C516	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C517	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C518	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C519	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C522	1-135-161-21	TANTAL CHIP	22MF	20%	10V
C523	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C524	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C525	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C529	1-164-361-11	CERAMIC CHIP	0.047MF		16V
C531	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C533	1-135-161-21	TANTAL CHIP	22MF	20%	10V
C534	1-164-361-11	CERAMIC CHIP	0.047MF		16V
C535	1-135-157-21	TANTAL CHIP	10MF	20%	6.3V
C550	1-164-227-11	CERAMIC CHIP	0.022MF	10%	25V
C582	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C583	1-162-964-11	CERAMIC CHIP	0.001MF	10%	50V
C584	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C585	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C586	1-162-955-11	CERAMIC CHIP	150PF	5%	50V
C587	1-162-952-11	CERAMIC CHIP	82PF	5%	50V
		CONNECTOR			
CN501	1-565-849-11	SOCKET, CONNECTOR 11P			
CN502	1-568-740-11	CONNECTOR, FPC (1.0MM)(ZIF)18P			
CN503	1-568-340-41	CONNECTOR, BOARD TO BOARD 5P			
		DIODE			
D550	8-719-941-86	DIODE DAN202U			
		IC			
IC501	8-752-033-38	IC CXA1202R			

Ref.No	Part No.	Description			Remark
		COIL			
L501	1-412-029-11	INDUCTOR CHIP	10UH		
L502	1-412-033-11	INDUCTOR CHIP	220UH		
L503	1-412-033-11	INDUCTOR CHIP	220UH		
L581	1-412-198-11	INDUCTOR	220UH		
L582	1-412-006-31	INDUCTOR CHIP	10UH		
		TRANSISTOR			
Q501	8-729-905-12	TRANSISTOR DTA144EU			
Q550	8-729-905-18	TRANSISTOR DTC144EU			
Q551	8-729-905-23	TRANSISTOR 2SA1576R			
Q581	8-729-905-23	TRANSISTOR 2SA1576R			
Q582	8-729-216-22	TRANSISTOR 2SA1162			
Q583	8-729-905-23	TRANSISTOR 2SA1576R			
		RESISTOR			
R502	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W
R503	1-216-838-11	METAL GLAZE	27K	5%	1/16W
R504	1-216-838-11	METAL GLAZE	27K	5%	1/16W
R505	1-216-838-11	METAL GLAZE	27K	5%	1/16W
R506	1-216-838-11	METAL GLAZE	27K	5%	1/16W
R507	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W
R509	1-216-839-11	METAL GLAZE	33K	5%	1/16W
R510	1-216-831-11	METAL GLAZE	6.8K	5%	1/16W
R512	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R514	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R515	1-216-837-11	METAL GLAZE	22K	5%	1/16W
R516	1-216-841-11	METAL GLAZE	47K	5%	1/16W
R517	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W
R520	1-216-791-11	METAL GLAZE	3.3	5%	1/16W
R524	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W
R525	1-216-809-11	METAL GLAZE	100	5%	1/16W
R526	1-216-809-11	METAL GLAZE	100	5%	1/16W
R551	1-216-820-11	METAL GLAZE	820	5%	1/16W
R552	1-216-865-11	METAL GLAZE	3K	5%	1/16W
R553	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W
R554	1-216-823-11	METAL GLAZE	1.5K	5%	1/16W
R555	1-216-837-11	METAL GLAZE	22K	5%	1/16W
R556	1-216-837-11	METAL GLAZE	22K	5%	1/16W
R557	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R558	1-216-839-11	METAL GLAZE	33K	5%	1/16W
R559	1-216-827-11	METAL GLAZE	3.3K	5%	1/16W
R560	1-216-827-11	METAL GLAZE	3.3K	5%	1/16W
R581	1-216-840-11	METAL GLAZE	39K	5%	1/16W
R582	1-216-837-11	METAL GLAZE	22K	5%	1/16W
R583	1-216-814-11	METAL GLAZE	270	5%	1/16W
R584	1-216-813-11	METAL GLAZE	220	5%	1/16W
R585	1-216-803-11	METAL GLAZE	33	5%	1/16W
R586	1-216-799-11	METAL GLAZE	15	5%	1/16W
R587	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R588	1-216-837-11	METAL GLAZE	22K	5%	1/16W
R589	1-216-831-11	METAL GLAZE	6.8K	5%	1/16W

VARIABLE RESISTOR

Ref.No	Part No.	Description	Remark
RV501	1-238-092-11	RES, ADJ CERMET 47K	
RV502	1-238-092-11	RES, ADJ CERMET 47K	

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*A-7061-937-A RG-8 BOARD, COMPLETE (Ref. No. 2000 series)

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CAPACITOR

Ref.No	Part No.	Description			Remark
C002	1-135-151-21	TANTAL. CHIP	4.7MF	20%	4V
C003	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C004	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C005	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C007	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C008	1-135-217-21	TANTAL. CHIP	15MF	20%	6.3V
C009	1-135-217-21	TANTAL. CHIP	15MF	20%	6.3V
C009	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C010	1-126-206-11	ELECT CHIP	100MF	20%	6.3V
C012	1-135-180-21	TANTAL. CHIP	3.3MF	20%	6.3V
C013	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C014	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C015	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C016	1-164-634-11	CERAMIC CHIP	1MF		16V
C018	1-163-011-11	CERAMIC CHIP	0.0015MF	10%	50V
C020	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C021	1-163-097-00	CERAMIC CHIP	15PF	5%	50V
C022	1-135-162-21	TANTAL. CHIP	33MF	20%	6.3V
C023	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C024	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C025	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C026	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C027	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C028	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C029	1-164-634-11	CERAMIC CHIP	1MF		16V
C030	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C031	1-164-634-11	CERAMIC CHIP	1MF		16V
C032	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C033	1-164-634-11	CERAMIC CHIP	1MF		16V
C034	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C035	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C036	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C037	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C038	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C039	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C040	1-135-181-21	TANTAL. CHIP	4.7MF	20%	6.3V
C041	1-135-149-21	TANTAL. CHIP	2.2MF	20%	10V
C042	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C043	1-164-182-11	CERAMIC CHIP	0.0033MF	10%	50V
C044	1-126-204-11	ELECT CHIP	47MF	20%	16V
C045	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C046	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C047	1-126-206-11	ELECT CHIP	100MF	20%	6.3V
C048	1-135-177-21	TANTAL. CHIP	1MF	20%	20V
C049	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C051	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C054	1-135-156-21	TANTAL. CHIP	6.8MF	20%	10V
C055	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C056	1-135-156-21	TANTAL. CHIP	6.8MF	20%	10V
C057	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C058	1-126-199-11	ELECT CHIP	6.8MF	20%	35V
C059	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C060	1-126-199-11	ELECT CHIP	6.8MF	20%	35V
C061	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C070	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C071	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C072	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C073	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C074	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C075	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C080	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C081	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C082	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C092	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C093	1-163-125-00	CERAMIC CHIP	220PF	5%	50V
C803	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C804	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C805	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C809	1-163-038-00	CERAMIC CHIP	0.1MF		25V

CONNECTOR

Ref.No	Part No.	Description	Remark
CN001	1-565-212-11	CONNECTOR, FPC (ZIF) 26P	
CN002	1-568-238-11	CONNECTOR, FPC (1.0MM)(ZIF)16P	
CN501	1-568-235-21	CONNECTOR, FPC (1.0MM)(ZIF)10P	
CN901	1-565-528-11	PIN, CONNECTOR (PC BOARD) 3P	

VARIABLE CAPACITOR

Ref.No	Part No.	Description	Remark
CV001	1-141-370-11	CAP, CHIP TRIMMER	
CV801	1-141-331-11	CAP, VAR, TRIMMER (CHIP)	

DIODE

Ref.No	Part No.	Description	Remark
D001	8-719-400-18	DIODE MA152WK	
D002	8-719-400-18	DIODE MA152WK	
D003	8-719-400-18	DIODE MA152WK	

FILTER

Ref.No	Part No.	Description	Remark
FL001	1-236-598-11	L.P.F (Y)	
FL002	1-236-599-11	B.P.F	

IC

Ref.No	Part No.	Description	Remark
IC001	8-759-633-73	IC M51406FP	
IC003	8-759-009-07	IC MC14053BF	
IC801	8-759-150-07	IC UPD6451AGT-601	

COIL

Ref.No	Part No.	Description		Remark
L001	1-410-655-31	INDUCTOR CHIP	120UH	
L003	1-412-029-11	INDUCTOR CHIP	10UH	
L004	1-410-385-11	INDUCTOR CHIP	22UH	
L005	1-410-385-11	INDUCTOR CHIP	22UH	
L006	1-410-385-11	INDUCTOR CHIP	22UH	
L007	1-410-377-31	INDUCTOR CHIP	4.7UH	
L008	1-410-377-31	INDUCTOR CHIP	4.7UH	
L009	1-410-393-11	INDUCTOR CHIP	100UH	
L010	1-410-393-11	INDUCTOR CHIP	100UH	
L801	1-410-658-31	INDUCTOR CHIP	220UH	
L802	1-412-192-11	INDUCTOR	56UH	

TRANSISTOR

Ref.No	Part No.	Description	Remark
Q001	8-729-100-66	TRANSISTOR 2SC1623	
Q002	8-729-100-66	TRANSISTOR 2SC1623	
Q003	8-729-100-66	TRANSISTOR 2SC1623	
Q005	8-729-900-53	TRANSISTOR DTC114EK	
Q006	8-729-904-41	TRANSISTOR FMY3	
Q007	8-729-904-44	TRANSISTOR FMY4	
Q008	8-729-904-41	TRANSISTOR FMY3	
Q009	8-729-904-44	TRANSISTOR FMY4	
Q010	8-729-904-41	TRANSISTOR FMY3	
Q011	8-729-904-44	TRANSISTOR FMY4	
Q014	8-729-901-01	TRANSISTOR DTC144EK	
Q901	8-729-901-00	TRANSISTOR DTC124EK	

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description			Remark
Q902	8-729-901-05	TRANSISTOR DTA124EK			

RESISTOR

Ref.No	Part No.	Description			Remark
R001	1-216-748-11	METAL GLAZE	39K	5%	1/10W
R002	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R003	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R004	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R005	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R006	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R007	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R008	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R009	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R010	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R011	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R012	1-216-079-00	METAL GLAZE	18K	5%	1/10W
R013	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R014	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R015	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R016	1-216-105-00	METAL GLAZE	220K	5%	1/10W
R017	1-216-037-00	METAL GLAZE	330	5%	1/10W
R018	1-216-037-00	METAL GLAZE	330	5%	1/10W
R019	1-216-037-00	METAL GLAZE	330	5%	1/10W
R020	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R021	1-216-095-00	METAL GLAZE	82K	5%	1/10W
R022	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R023	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R024	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R025	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R026	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R027	1-216-027-00	METAL GLAZE	120	5%	1/10W
R028	1-216-045-00	METAL GLAZE	680	5%	1/10W
R029	1-216-295-00	METAL GLAZE	0	5%	1/10W
R031	1-216-042-00	METAL GLAZE	510	5%	1/10W
R032	1-216-003-11	METAL GLAZE	12	5%	1/10W
R033	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R034	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R035	1-216-091-00	METAL GLAZE	56K	5%	1/10W
R036	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W
R037	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R038	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R041	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R042	1-216-295-00	METAL GLAZE	0	5%	1/10W
R043	1-216-033-00	METAL GLAZE	220	5%	1/10W
R045	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R046	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R049	1-216-101-00	METAL GLAZE	150K	5%	1/10W
R050	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R052	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R053	1-216-090-00	METAL GLAZE	51K	5%	1/10W
R054	1-216-031-00	METAL GLAZE	180	5%	1/10W
R056	1-216-031-00	METAL GLAZE	180	5%	1/10W
R057	1-216-033-00	METAL GLAZE	220	5%	1/10W
R061	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R062	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R064	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R065	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R066	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R067	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R068	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W
R069	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W
R070	1-216-121-00	METAL GLAZE	1M	5%	1/10W
R071	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R072	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R073	1-216-687-11	METAL CHIP	33K	0.50%	1/10W
R074	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
R075	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R076	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R080	1-216-294-00	METAL GLAZE	10M	5%	1/8W
R501	1-216-101-00	METAL GLAZE	150K	5%	1/10W
R502	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R503	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R504	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R505	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R506	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R507	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R801	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R802	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R803	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R804	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R805	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R806	1-216-748-11	METAL GLAZE	39K	5%	1/10W
R807	1-216-748-11	METAL GLAZE	39K	5%	1/10W
R808	1-216-748-11	METAL GLAZE	39K	5%	1/10W
R809	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R810	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R811	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R812	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R901	1-216-049-00	METAL GLAZE	1K	5%	1/10W

VARIABLE RESISTOR

Ref.No	Part No.	Description
RV001	1-241-118-11	RES, VAR, CARBON 20K
RV002	1-241-117-11	RES, VAR, CARBON 10K
RV003	1-238-091-11	RES, ADJ CERMET 22K
RV005	1-238-092-11	RES, ADJ CERMET 47K
RV006	1-238-091-11	RES, ADJ CERMET 22K
RV009	1-241-006-11	RES, VAR, CARBON 50K
RV010	1-238-092-11	RES, ADJ CERMET 47K
RV601	1-241-029-11	RES, VAR, CARBON 2K/2K

SWITCH

Ref.No	Part No.	Description
SW601	1-570-386-21	SWITCH, SLIDE (DBB)

CRYSTAL

Ref.No	Part No.	Description
X001	1-579-041-11	VIBRATOR, CRYSTAL

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***A-7062-315-A AU-53 BOARD, COMPLETE** (Ref. No. 7000 series)

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CAPACITOR

Ref.No	Part No.	Description			Remark
C104	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C105	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C106	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C107	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C108	1-135-145-11	TANTAL. CHIP	0.47MF	20%	35V
C109	1-162-965-11	CERAMIC CHIP	0.0015MF	10%	50V
C110	1-164-173-11	CERAMIC CHIP	0.0039MF	10%	50V
C111	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C112	1-162-966-11	CERAMIC CHIP	0.0022MF	10%	50V
C113	1-126-205-11	ELECT CHIP	47MF	20%	6.3V
C114	1-164-156-11	CERAMIC CHIP	0.1MF		25V
C115	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C117	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C118	1-162-968-11	CERAMIC CHIP	0.0047MF	10%	50V
C122	1-135-151-21	TANTAL. CHIP	4.7MF	20%	4V
C123	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C124	1-162-587-11	CERAMIC CHIP	0.039MF	10%	25V
C125	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C126	1-162-963-11	CERAMIC CHIP	680PF	10%	50V

When indicating parts by reference number, please include the board name.

AU-53

Ref.No	Part No.	Description			Remark
C127	1-164-174-11	CERAMIC CHIP	0.0082MF	10%	25V
C128	1-135-177-21	TANTAL. CHIP	1MF	20%	20V
C129	1-128-004-11	ELECT CHIP	10MF	20%	16V
C130	1-128-004-11	ELECT CHIP	10MF	20%	16V
C131	1-128-003-11	ELECT CHIP	22MF	20%	4V
C134	1-126-207-11	ELECT CHIP	33MF	20%	4V
C135	1-164-634-11	CERAMIC CHIP	1MF		16V
C136	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C137	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C138	1-164-634-11	CERAMIC CHIP	1MF		16V
C139	1-126-207-11	ELECT CHIP	33MF	20%	4V
C140	1-163-024-00	CERAMIC CHIP	0.018MF	10%	50V
C142	1-164-218-11	CERAMIC CHIP	180PF	0.25PF	50V
C143	1-162-966-11	CERAMIC CHIP	0.0022MF	10%	50V
C144	1-164-172-11	CERAMIC CHIP	0.0056MF	5%	25V
C145	1-163-986-00	CERAMIC CHIP	0.027MF	10%	25V
C163	1-124-778-00	ELECT CHIP	22MF	20%	6.3V
C164	1-162-968-11	CERAMIC CHIP	0.0047MF	10%	50V
C165	1-162-968-11	CERAMIC CHIP	0.0047MF	10%	50V
C166	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C167	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C168	1-162-968-11	CERAMIC CHIP	0.0047MF	10%	50V
C169	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C170	1-128-003-11	ELECT CHIP	22MF	20%	4V
C171	1-128-003-11	ELECT CHIP	22MF	20%	4V
C172	1-164-156-11	CERAMIC CHIP	0.1MF		25V
C173	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C174	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C175	1-164-361-11	CERAMIC CHIP	0.047MF		16V
C176	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C179	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
C180	1-162-928-11	CERAMIC CHIP	120PF	5%	50V
C181	1-162-965-11	CERAMIC CHIP	0.0015MF	10%	50V
C182	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C183	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C204	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C205	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C206	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C207	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C208	1-135-145-11	TANTAL. CHIP	0.47MF	20%	35V
C209	1-162-965-11	CERAMIC CHIP	0.0015MF	10%	50V
C210	1-164-173-11	CERAMIC CHIP	0.0039MF	10%	50V
C211	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C212	1-162-966-11	CERAMIC CHIP	0.0022MF	10%	50V
C213	1-126-205-11	ELECT CHIP	47MF	20%	6.3V
C214	1-164-156-11	CERAMIC CHIP	0.1MF		25V
C215	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C217	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C218	1-162-968-11	CERAMIC CHIP	0.0047MF	10%	50V
C222	1-135-151-21	TANTAL. CHIP	4.7MF	20%	4V
C223	1-162-910-11	CERAMIC CHIP	5PF	0.25PF	50V
C224	1-162-587-11	CERAMIC CHIP	0.039MF	10%	25V
C225	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C226	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C227	1-164-174-11	CERAMIC CHIP	0.0082MF	10%	25V
C228	1-135-177-21	TANTAL. CHIP	1MF	20%	20V
C229	1-128-004-11	ELECT CHIP	10MF	20%	16V
C230	1-128-004-11	ELECT CHIP	10MF	20%	16V
C231	1-128-003-11	ELECT CHIP	22MF	20%	4V
C234	1-126-207-11	ELECT CHIP	33MF	20%	4V
C235	1-164-634-11	CERAMIC CHIP	1MF		16V
C236	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C237	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C238	1-164-634-11	CERAMIC CHIP	1MF		16V
C239	1-126-207-11	ELECT CHIP	33MF	20%	4V

Ref.No	Part No.	Description			Remark
C240	1-163-986-00	CERAMIC CHIP	0.027MF	10%	25V
C242	1-164-218-11	CERAMIC CHIP	180PF	0.25PF	50V
C243	1-162-966-11	CERAMIC CHIP	0.0022MF	10%	50V
C244	1-163-024-00	CERAMIC CHIP	0.018MF	10%	50V
C245	1-164-172-11	CERAMIC CHIP	0.0056MF	5%	25V
C263	1-124-778-00	ELECT CHIP	22MF	20%	6.3V
C264	1-162-968-11	CERAMIC CHIP	0.0047MF	10%	50V
C265	1-162-968-11	CERAMIC CHIP	0.0047MF	10%	50V
C269	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C270	1-128-003-11	ELECT CHIP	22MF	20%	4V
C271	1-128-003-11	ELECT CHIP	22MF	20%	4V
C275	1-164-361-11	CERAMIC CHIP	0.047MF		16V
C276	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C277	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C278	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C281	1-162-965-11	CERAMIC CHIP	0.0015MF	10%	50V
C309	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C310	1-162-964-11	CERAMIC CHIP	0.001MF	10%	50V
C315	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C316	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C317	1-164-156-11	CERAMIC CHIP	0.1MF		25V
C318	1-135-170-21	TANTAL. CHIP	6.8MF	20%	4V
C319	1-164-156-11	CERAMIC CHIP	0.1MF		25V
C326	1-164-634-11	CERAMIC CHIP	1MF		16V
C401	1-135-151-21	TANTAL. CHIP	4.7MF	20%	4V
C402	1-135-151-21	TANTAL. CHIP	4.7MF	20%	4V
C403	1-135-151-21	TANTAL. CHIP	4.7MF	20%	4V
C404	1-135-151-21	TANTAL. CHIP	4.7MF	20%	4V
C405	1-135-151-21	TANTAL. CHIP	4.7MF	20%	4V
C406	1-135-151-21	TANTAL. CHIP	4.7MF	20%	4V
C407	1-135-181-21	TANTAL. CHIP	4.7MF	20%	6.3V
C408	1-135-181-21	TANTAL. CHIP	4.7MF	20%	6.3V
C411	1-128-003-11	ELECT CHIP	22MF	20%	4V
C413	1-135-151-21	TANTAL. CHIP	4.7MF	20%	4V
C414	1-135-151-21	TANTAL. CHIP	4.7MF	20%	4V
C415	1-135-181-21	TANTAL. CHIP	4.7MF	20%	6.3V
C416	1-135-181-21	TANTAL. CHIP	4.7MF	20%	6.3V
C417	1-135-162-21	TANTAL. CHIP	33MF	20%	6.3V
C418	1-124-778-00	ELECT CHIP	22MF	20%	6.3V
C420	1-135-181-21	TANTAL. CHIP	4.7MF	20%	6.3V
C421	1-126-207-11	ELECT CHIP	33MF	20%	4V
C424	1-135-181-21	TANTAL. CHIP	4.7MF	20%	6.3V
C425	1-162-966-11	CERAMIC CHIP	0.0022MF	10%	50V
C426	1-135-181-21	TANTAL. CHIP	4.7MF	20%	6.3V
C427	1-135-181-21	TANTAL. CHIP	4.7MF	20%	6.3V
C428	1-164-156-11	CERAMIC CHIP	0.1MF		25V
C429	1-164-634-11	CERAMIC CHIP	1MF		16V
C431	1-135-161-21	TANTAL. CHIP	22MF	20%	10V
C432	1-135-145-11	TANTAL. CHIP	0.47MF	20%	35V
C433	1-164-156-11	CERAMIC CHIP	0.1MF		25V
C434	1-135-181-21	TANTAL. CHIP	4.7MF	20%	6.3V
C435	1-162-966-11	CERAMIC CHIP	0.0022MF	10%	50V
C436	1-164-156-11	CERAMIC CHIP	0.1MF		25V
C437	1-126-206-11	ELECT CHIP	100MF	20%	6.3V
C438	1-126-206-11	ELECT CHIP	100MF	20%	6.3V
C440	1-164-634-11	CERAMIC CHIP	1MF		16V
C441	1-164-634-11	CERAMIC CHIP	1MF		16V
C442	1-135-181-21	TANTAL. CHIP	4.7MF	20%	6.3V
C443	1-135-181-21	TANTAL. CHIP	4.7MF	20%	6.3V
C444	1-162-946-11	CERAMIC CHIP	27PF	5%	50V
C450	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C455	1-162-946-11	CERAMIC CHIP	27PF	5%	50V
C456	1-164-227-11	CERAMIC CHIP	0.022MF	10%	25V
C457	1-162-965-11	CERAMIC CHIP	0.0015MF	10%	50V
C458	1-162-916-11	CERAMIC CHIP	12PF	5%	50V

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description		Remark
C459	1-164-005-11	CERAMIC CHIP	0.47MF	25V
		CONNECTOR		
CN101	1-569-635-41	CONNECTOR, BOARD TO BOARD 20P		
CN102	1-569-636-41	CONNECTOR, BOARD TO BOARD 22P		
		DIODE		
D401	8-719-941-09	DIODE DAP202U		
D402	8-719-941-86	DIODE DAN202U		
		FILTER		
FL101	1-236-831-11	FILTER, BAND PASS		
FL102	1-236-832-11	FILTER, BAND PASS		
		IC		
IC101	8-752-053-04	IC CXA1537R		
IC103	8-759-009-07	IC MC14053BF		
IC104	8-759-030-16	IC MC34182M		
IC105	8-759-009-07	IC MC14053BF		
IC106	8-759-030-16	IC MC34182M		
IC107	8-759-009-06	IC MC14052BF		
IC108	8-759-030-16	IC MC34182M		
IC109	8-759-030-16	IC MC34182M		
IC110	8-759-234-77	IC TC4S66F		
IC111	8-759-234-77	IC TC4S66F		
IC112	8-759-991-27	IC BA3570F		
IC113	8-752-334-42	IC CXD2106Q		
IC114	8-759-209-15	IC TC4SU69F		
IC115	8-759-209-15	IC TC4SU69F		
IC116	8-759-209-15	IC TC4SU69F		
IC201	8-752-053-04	IC CXA1537R		
		COIL		
L101	1-412-066-21	INDUCTOR CHIP	220UH	
L201	1-412-066-21	INDUCTOR CHIP	220UH	
L401	1-412-031-11	INDUCTOR CHIP	47UH	
		TRANSISTOR		
Q101	8-729-905-35	TRANSISTOR 2SC4081R		
Q106	8-729-905-35	TRANSISTOR 2SC4081R		
Q107	8-729-905-35	TRANSISTOR 2SC4081R		
Q108	8-729-905-35	TRANSISTOR 2SC4081R		
Q109	8-729-905-35	TRANSISTOR 2SC4081R		
Q111	8-729-905-35	TRANSISTOR 2SC4081R		
Q112	8-729-905-35	TRANSISTOR 2SC4081R		
Q140	8-729-905-18	TRANSISTOR DTC144EU		
Q141	8-729-905-18	TRANSISTOR DTC144EU		
Q201	8-729-905-35	TRANSISTOR 2SC4081R		
Q205	8-729-905-12	TRANSISTOR DTA144EU		
Q208	8-729-905-35	TRANSISTOR 2SC4081R		
Q209	8-729-905-35	TRANSISTOR 2SC4081R		
Q240	8-729-905-18	TRANSISTOR DTC144EU		
Q241	8-729-905-18	TRANSISTOR DTC144EU		
Q308	8-729-905-23	TRANSISTOR 2SA1576R		
Q309	8-729-905-18	TRANSISTOR DTC144EU		
Q310	8-729-905-35	TRANSISTOR 2SC4081R		
Q311	8-729-905-35	TRANSISTOR 2SC4081R		
Q313	8-729-903-10	TRANSISTOR FMW		
Q314	8-729-905-35	TRANSISTOR 2SC4081R		
Q315	8-729-905-23	TRANSISTOR 2SA1576R		
Q401	8-729-905-35	TRANSISTOR 2SC4081R		
Q402	8-729-905-35	TRANSISTOR 2SC4081R		
Q403	8-729-905-23	TRANSISTOR 2SA1576R		
Q404	8-729-905-35	TRANSISTOR 2SC4081R		

Ref.No	Part No.	Description			Remark
Q405	8-729-920-XX	TRANSISTOR DTA114EU			
Q406	8-729-920-XX	TRANSISTOR DTA114EU			
Q407	8-729-905-18	TRANSISTOR DTC144EU			
Q408	8-729-905-35	TRANSISTOR 2SC4081R			
Q409	8-729-905-35	TRANSISTOR 2SC4081R			
Q410	8-729-905-18	TRANSISTOR DTC144EU			
Q411	8-729-905-35	TRANSISTOR 2SC4081R			
Q412	8-729-905-23	TRANSISTOR 2SA1576R			
Q413	8-729-920-XX	TRANSISTOR DTA114EU			
		RESISTOR			
R101	1-216-864-11	METAL GLAZE	0	5%	1/16W
R105	1-216-835-11	METAL GLAZE	15K	5%	1/16W
R106	1-216-840-11	METAL GLAZE	39K	5%	1/16W
R107	1-216-864-11	METAL GLAZE	0	5%	1/16W
R108	1-216-864-11	METAL GLAZE	0	5%	1/16W
R109	1-216-831-11	METAL GLAZE	6.8K	5%	1/16W
R110	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W
R111	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W
R112	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W
R113	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R114	1-216-857-11	METAL GLAZE	1M	5%	1/16W
R115	1-216-850-11	METAL GLAZE	270K	5%	1/16W
R116	1-216-820-11	METAL GLAZE	820	5%	1/16W
R117	1-216-820-11	METAL GLAZE	820	5%	1/16W
R127	1-216-864-11	METAL GLAZE	0	5%	1/16W
R128	1-216-836-11	METAL GLAZE	18K	5%	1/16W
R129	1-216-840-11	METAL GLAZE	39K	5%	1/16W
R130	1-216-851-11	METAL GLAZE	330K	5%	1/16W
R133	1-216-836-11	METAL GLAZE	18K	5%	1/16W
R135	1-216-841-11	METAL GLAZE	47K	5%	1/16W
R139	1-216-826-11	METAL GLAZE	2.7K	5%	1/16W
R140	1-216-815-11	METAL GLAZE	330	5%	1/16W
R141	1-216-837-11	METAL GLAZE	22K	5%	1/16W
R142	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W
R143	1-216-828-11	METAL GLAZE	3.9K	5%	1/16W
R144	1-216-834-11	METAL GLAZE	12K	5%	1/16W
R145	1-216-819-11	METAL GLAZE	680	5%	1/16W
R146	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W
R147	1-216-827-11	METAL GLAZE	3.3K	5%	1/16W
R148	1-216-826-11	METAL GLAZE	2.7K	5%	1/16W
R149	1-216-827-11	METAL GLAZE	3.3K	5%	1/16W
R150	1-216-826-11	METAL GLAZE	2.7K	5%	1/16W
R151	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R152	1-216-838-11	METAL GLAZE	27K	5%	1/16W
R153	1-216-836-11	METAL GLAZE	18K	5%	1/16W
R154	1-216-826-11	METAL GLAZE	2.7K	5%	1/16W
R155	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W
R156	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R157	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R158	1-216-831-11	METAL GLAZE	6.8K	5%	1/16W
R159	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R160	1-216-831-11	METAL GLAZE	6.8K	5%	1/16W
R161	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R162	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R163	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R164	1-216-834-11	METAL GLAZE	12K	5%	1/16W
R165	1-216-836-11	METAL GLAZE	18K	5%	1/16W
R166	1-216-831-11	METAL GLAZE	6.8K	5%	1/16W
R167	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R168	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W
R169	1-216-839-11	METAL GLAZE	33K	5%	1/16W
R170	1-216-839-11	METAL GLAZE	33K	5%	1/16W
R171	1-216-827-11	METAL GLAZE	3.3K	5%	1/16W
R172	1-216-834-11	METAL GLAZE	12K	5%	1/16W
R173	1-216-845-11	METAL GLAZE	100K	5%	1/16W

When indicating parts by reference number, please include the board name.

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Ref.No	Part No.	Description	Remark
R174	1-216-845-11	METAL GLAZE 100K 5% 1/16W	
R175	1-216-835-11	METAL GLAZE 15K 5% 1/16W	
R176	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R177	1-216-811-11	METAL GLAZE 150 5% 1/16W	
R178	1-216-835-11	METAL GLAZE 15K 5% 1/16W	
R179	1-216-839-11	METAL GLAZE 33K 5% 1/16W	
R182	1-216-839-11	METAL GLAZE 33K 5% 1/16W	
R183	1-216-864-11	METAL GLAZE 0 5% 1/16W	
R184	1-216-842-11	METAL GLAZE 56K 5% 1/16W	
R185	1-216-836-11	METAL GLAZE 18K 5% 1/16W	
R186	1-216-829-11	METAL GLAZE 4.7K 5% 1/16W	
R188	1-216-824-11	METAL GLAZE 1.8K 5% 1/16W	
R189	1-216-841-11	METAL GLAZE 47K 5% 1/16W	
R190	1-216-836-11	METAL GLAZE 18K 5% 1/16W	
R191	1-216-820-11	METAL GLAZE 820 5% 1/16W	
R192	1-216-825-11	METAL GLAZE 2.2K 5% 1/16W	
R193	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R199	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R201	1-216-864-11	METAL GLAZE 0 5% 1/16W	
R205	1-216-835-11	METAL GLAZE 15K 5% 1/16W	
R206	1-216-840-11	METAL GLAZE 39K 5% 1/16W	
R207	1-216-864-11	METAL GLAZE 0 5% 1/16W	
R210	1-216-829-11	METAL GLAZE 4.7K 5% 1/16W	
R211	1-216-829-11	METAL GLAZE 4.7K 5% 1/16W	
R212	1-216-829-11	METAL GLAZE 4.7K 5% 1/16W	
R213	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R214	1-216-857-11	METAL GLAZE 1M 5% 1/16W	
R215	1-216-850-11	METAL GLAZE 270K 5% 1/16W	
R216	1-216-819-11	METAL GLAZE 680 5% 1/16W	
R217	1-216-819-11	METAL GLAZE 680 5% 1/16W	
R227	1-216-864-11	METAL GLAZE 0 5% 1/16W	
R228	1-216-836-11	METAL GLAZE 18K 5% 1/16W	
R229	1-216-840-11	METAL GLAZE 39K 5% 1/16W	
R230	1-216-851-11	METAL GLAZE 330K 5% 1/16W	
R233	1-216-841-11	METAL GLAZE 47K 5% 1/16W	
R235	1-216-841-11	METAL GLAZE 47K 5% 1/16W	
R236	1-216-837-11	METAL GLAZE 22K 5% 1/16W	
R239	1-216-825-11	METAL GLAZE 2.2K 5% 1/16W	
R240	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R241	1-216-815-11	METAL GLAZE 330 5% 1/16W	
R242	1-216-813-11	METAL GLAZE 220 5% 1/16W	
R243	1-216-828-11	METAL GLAZE 3.9K 5% 1/16W	
R244	1-216-834-11	METAL GLAZE 12K 5% 1/16W	
R245	1-216-819-11	METAL GLAZE 680 5% 1/16W	
R246	1-216-825-11	METAL GLAZE 2.2K 5% 1/16W	
R247	1-216-827-11	METAL GLAZE 3.3K 5% 1/16W	
R248	1-216-826-11	METAL GLAZE 2.7K 5% 1/16W	
R249	1-216-827-11	METAL GLAZE 3.3K 5% 1/16W	
R250	1-216-826-11	METAL GLAZE 2.7K 5% 1/16W	
R251	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R252	1-216-838-11	METAL GLAZE 27K 5% 1/16W	
R253	1-216-837-11	METAL GLAZE 22K 5% 1/16W	
R254	1-216-826-11	METAL GLAZE 2.7K 5% 1/16W	
R254	1-216-826-11	METAL GLAZE 2.7K 5% 1/16W	
R255	1-216-825-11	METAL GLAZE 2.2K 5% 1/16W	
R257	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R258	1-216-831-11	METAL GLAZE 6.8K 5% 1/16W	
R259	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R260	1-216-831-11	METAL GLAZE 6.8K 5% 1/16W	
R261	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R262	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R269	1-216-839-11	METAL GLAZE 33K 5% 1/16W	
R270	1-216-839-11	METAL GLAZE 33K 5% 1/16W	
R271	1-216-827-11	METAL GLAZE 3.3K 5% 1/16W	
R272	1-216-834-11	METAL GLAZE 12K 5% 1/16W	

Ref.No	Part No.	Description	Remark
R273	1-216-845-11	METAL GLAZE 100K 5% 1/16W	
R274	1-216-845-11	METAL GLAZE 100K 5% 1/16W	
R275	1-216-835-11	METAL GLAZE 15K 5% 1/16W	
R276	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R277	1-216-811-11	METAL GLAZE 150 5% 1/16W	
R278	1-216-835-11	METAL GLAZE 15K 5% 1/16W	
R279	1-216-839-11	METAL GLAZE 33K 5% 1/16W	
R280	1-216-864-11	METAL GLAZE 0 5% 1/16W	
R281	1-216-841-11	METAL GLAZE 47K 5% 1/16W	
R284	1-216-831-11	METAL GLAZE 6.8K 5% 1/16W	
R293	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R314	1-216-827-11	METAL GLAZE 3.3K 5% 1/16W	
R315	1-216-829-11	METAL GLAZE 4.7K 5% 1/16W	
R316	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R318	1-216-839-11	METAL GLAZE 33K 5% 1/16W	
R319	1-216-835-11	METAL GLAZE 15K 5% 1/16W	
R323	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R324	1-216-830-11	METAL GLAZE 5.6K 5% 1/16W	
R325	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R327	1-216-845-11	METAL GLAZE 100K 5% 1/16W	
R328	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R329	1-216-828-11	METAL GLAZE 3.9K 5% 1/16W	
R330	1-216-826-11	METAL GLAZE 2.7K 5% 1/16W	
R330	1-216-826-11	METAL GLAZE 2.7K 5% 1/16W	
R331	1-216-845-11	METAL GLAZE 100K 5% 1/16W	
R332	1-216-837-11	METAL GLAZE 22K 5% 1/16W	
R333	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R334	1-216-838-11	METAL GLAZE 27K 5% 1/16W	
R335	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R401	1-216-845-11	METAL GLAZE 100K 5% 1/16W	
R402	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R403	1-216-845-11	METAL GLAZE 100K 5% 1/16W	
R404	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R405	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R407	1-216-849-11	METAL GLAZE 220K 5% 1/16W	
R408	1-216-847-11	METAL GLAZE 150K 5% 1/16W	
R409	1-216-842-11	METAL GLAZE 56K 5% 1/16W	
R410	1-216-842-11	METAL GLAZE 56K 5% 1/16W	
R411	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R412	1-216-842-11	METAL GLAZE 56K 5% 1/16W	
R413	1-216-839-11	METAL GLAZE 33K 5% 1/16W	
R414	1-216-842-11	METAL GLAZE 56K 5% 1/16W	
R415	1-216-842-11	METAL GLAZE 56K 5% 1/16W	
R421	1-216-841-11	METAL GLAZE 47K 5% 1/16W	
R422	1-216-841-11	METAL GLAZE 47K 5% 1/16W	
R423	1-216-829-11	METAL GLAZE 4.7K 5% 1/16W	
R424	1-216-831-11	METAL GLAZE 6.8K 5% 1/16W	
R425	1-216-829-11	METAL GLAZE 4.7K 5% 1/16W	
R426	1-216-831-11	METAL GLAZE 6.8K 5% 1/16W	
R427	1-216-864-11	METAL GLAZE 0 5% 1/16W	
R428	1-216-864-11	METAL GLAZE 0 5% 1/16W	
R429	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R430	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R431	1-216-819-11	METAL GLAZE 680 5% 1/16W	
R432	1-216-819-11	METAL GLAZE 680 5% 1/16W	
R433	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R434	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R435	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R436	1-216-836-11	METAL GLAZE 18K 5% 1/16W	
R437	1-216-829-11	METAL GLAZE 4.7K 5% 1/16W	
R438	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R440	1-216-841-11	METAL GLAZE 47K 5% 1/16W	
R441	1-216-841-11	METAL GLAZE 47K 5% 1/16W	
R442	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R443	1-216-823-11	METAL GLAZE 1.5K 5% 1/16W	

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description			Remark
R444	1-216-816-11	METAL GLAZE	390	5%	1/16W
R445	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R446	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R447	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R450	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R451	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R453	1-216-857-11	METAL GLAZE	1M	5%	1/16W
R456	1-216-804-11	METAL GLAZE	39	5%	1/16W
R457	1-216-804-11	METAL GLAZE	39	5%	1/16W
R458	1-216-841-11	METAL GLAZE	47K	5%	1/16W
R459	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R460	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R461	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W
R462	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R463	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W
R464	1-216-817-11	METAL GLAZE	470	5%	1/16W
R465	1-216-842-11	METAL GLAZE	56K	5%	1/16W
R466	1-216-847-11	METAL GLAZE	150K	5%	1/16W
R467	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W
R468	1-216-831-11	METAL GLAZE	6.8K	5%	1/16W

VARIABLE RESISTOR

Ref.No	Part No.	Description
RV101	1-238-091-11	RES, ADJ CERMET 22K
RV102	1-238-090-11	RES, ADJ CERMET 10K
RV201	1-238-092-11	RES, ADJ CERMET 47K
RV202	1-238-090-11	RES, ADJ CERMET 10K
RV203	1-238-091-11	RES, ADJ CERMET 22K
RV204	1-238-089-11	RES, ADJ CERMET 4.7K
RV401	1-238-093-11	RES, ADJ CERMET 100K
RV402	1-238-093-11	RES, ADJ CERMET 100K

CRYSTAL

Ref.No	Part No.	Description
X101	1-579-050-11	VIBRATOR, CRYSTAL

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A-7062-316-A SV-38 BOARD, COMPLETE (Ref. No. 5000 series)
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Part No.	Description
1-634-993-11	FP-270 FLEXIBLE BOARD
3-744-169-01	COVER, CS JACK
3-744-175-01	COVER, IO JACK
*3-746-902-01	CASE (LID), SHIELD, SDD
*3-746-903-01	CASE (LID), SHIELD, INDEX

CAPACITOR

Ref.No	Part No.	Description			Remark
C101	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C102	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C103	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C104	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C105	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C106	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C107	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C108	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C109	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C110	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C111	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C112	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C113	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C114	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C115	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C116	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C117	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C118	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C119	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C120	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C121	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C122	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C123	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C124	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C125	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C126	1-135-159-21	TANTAL. CHIP	10MF	20%	20V
C127	1-126-206-11	ELECT CHIP	100MF	20%	6.3V
C128	1-164-633-11	CERAMIC CHIP	0.1MF	10%	25V
C131	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C132	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C134	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C135	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C136	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C138	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C139	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C140	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C141	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C142	1-164-633-11	CERAMIC CHIP	0.1MF	10%	25V
C143	1-164-633-11	CERAMIC CHIP	0.1MF	10%	25V
C144	1-162-970-11	CERAMIC CHIP	0.01MF	10%	25V
C145	1-162-970-11	CERAMIC CHIP	0.01MF	10%	25V
C146	1-162-995-11	CERAMIC CHIP	0.022MF		50V
C201	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C202	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C203	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C204	1-164-633-11	CERAMIC CHIP	0.1MF	10%	25V
C206	1-162-970-11	CERAMIC CHIP	0.01MF	10%	25V
C208	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C209	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C210	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C211	1-162-964-11	CERAMIC CHIP	0.001MF	10%	50V
C212	1-164-633-11	CERAMIC CHIP	0.1MF	10%	25V
C213	1-162-969-11	CERAMIC CHIP	0.0068MF	10%	25V
C214	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C215	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C216	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C217	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C218	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C219	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C220	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C221	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C222	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C223	1-162-970-11	CERAMIC CHIP	0.01MF	10%	25V
C224	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C225	1-162-970-11	CERAMIC CHIP	0.01MF	10%	25V
C226	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C228	1-162-917-11	CERAMIC CHIP	15PF	5%	50V
C229	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C230	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C231	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C232	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C233	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C234	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C235	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C236	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C237	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C238	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C239	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C240	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C241	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C242	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C243	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C244	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C245	1-162-945-11	CERAMIC CHIP	22PF	5%	50V

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description			Remark
C246	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C247	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C248	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C249	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C250	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C251	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C252	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C253	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C254	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C255	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C256	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C257	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C258	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C259	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C260	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C261	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C262	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C263	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C265	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C266	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C267	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C268	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C269	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C270	1-162-970-11	CERAMIC CHIP	0.01MF	10%	25V
C271	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C272	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C302	1-162-966-11	CERAMIC CHIP	0.0022MF	10%	50V
C305	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C308	1-162-956-11	CERAMIC CHIP	180PF	5%	50V
C309	1-162-947-11	CERAMIC CHIP	33PF	5%	50V
C310	1-162-963-11	CERAMIC CHIP	680PF	10%	50V
C311	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C312	1-162-962-11	CERAMIC CHIP	470PF	10%	50V
C313	1-135-149-21	TANTAL. CHIP	2.2MF	20%	10V
C315	1-162-970-11	CERAMIC CHIP	0.01MF	10%	25V
C317	1-135-180-21	TANTAL. CHIP	3.3MF	20%	6.3V
C319	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C320	1-162-970-11	CERAMIC CHIP	0.01MF	10%	25V
C321	1-164-633-11	CERAMIC CHIP	0.1MF	10%	25V
C401	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C402	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C403	1-127-489-11	ELECT(SOLID)	10MF	20%	10V
C404	1-127-558-11	ELECT(SOLID)	10MF	20%	10V
C405	1-127-558-11	ELECT(SOLID)	10MF	20%	10V
C406	1-127-558-11	ELECT(SOLID)	10MF	20%	10V
C407	1-163-123-00	CERAMIC CHIP	180PF	5%	50V
C408	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C409	1-164-633-11	CERAMIC CHIP	0.1MF	10%	25V
C410	1-127-558-11	ELECT(SOLID)	10MF	20%	10V
C411	1-164-361-11	CERAMIC CHIP	0.047MF		16V
C412	1-127-558-11	ELECT(SOLID)	10MF	20%	10V
C413	1-164-633-11	CERAMIC CHIP	0.1MF	10%	25V
C414	1-164-633-11	CERAMIC CHIP	0.1MF	10%	25V
C415	1-162-960-11	CERAMIC CHIP	220PF	10%	50V
C416	1-162-964-11	CERAMIC CHIP	0.001MF	10%	50V
C417	1-164-361-11	CERAMIC CHIP	0.047MF		16V
C418	1-162-916-11	CERAMIC CHIP	12PF	5%	50V
C419	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C420	1-127-491-00	ELECT(SOLID)	22MF	20%	10V
C421	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C422	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C423	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C424	1-127-558-11	ELECT(SOLID)	10MF	20%	10V
C425	1-162-919-11	CERAMIC CHIP	22PF	5%	50V
C426	1-127-558-11	ELECT(SOLID)	10MF	20%	10V
C427	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C428	1-127-558-11	ELECT(SOLID)	10MF	20%	10V
C429	1-135-216-11	TANTAL. CHIP	10MF	20%	10V
C430	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C431	1-127-558-11	ELECT(SOLID)	10MF	20%	10V
C432	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C433	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C434	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C435	1-135-159-21	TANTAL. CHIP	10MF	20%	20V
C436	1-135-181-21	TANTAL. CHIP	4.7MF	20%	6.3V
C437	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C438	1-136-718-11	TANTAL. CHIP	0.1MF	5%	25V
C439	1-164-330-21	CERAMIC CHIP	0.22MF	10%	16V
C440	1-164-330-21	CERAMIC CHIP	0.22MF	10%	16V
C441	1-164-330-21	CERAMIC CHIP	0.22MF	10%	16V
C442	1-164-634-11	CERAMIC CHIP	1MF		16V
C443	1-135-159-21	TANTAL. CHIP	10MF	20%	20V
C444	1-162-967-11	CERAMIC CHIP	0.0033MF	10%	50V
C445	1-162-970-11	CERAMIC CHIP	0.01MF	10%	25V
C446	1-164-330-21	CERAMIC CHIP	0.22MF	10%	16V
C447	1-162-967-11	CERAMIC CHIP	0.0033MF	10%	50V
C448	1-164-330-21	CERAMIC CHIP	0.22MF	10%	16V
C449	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C450	1-162-967-11	CERAMIC CHIP	0.0033MF	10%	50V
C451	1-164-633-11	CERAMIC CHIP	0.1MF	10%	25V
C453	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C454	1-162-964-11	CERAMIC CHIP	0.001MF	10%	50V
C455	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C456	1-135-180-21	TANTAL. CHIP	3.3MF	20%	6.3V
C457	1-135-149-21	TANTAL. CHIP	2.2MF	20%	10V
C458	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C460	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C461	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C499	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C601	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C602	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C603	1-135-177-21	TANTAL. CHIP	1MF	20%	20V
C604	1-124-779-00	ELECT CHIP	10MF	20%	16V
C605	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C606	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C607	1-164-361-11	CERAMIC CHIP	0.047MF		16V
C608	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C609	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C610	1-164-361-11	CERAMIC CHIP	0.047MF		16V
C611	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C612	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C613	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C614	1-124-778-00	ELECT CHIP	22MF	20%	6.3V
C615	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C616	1-164-222-11	CERAMIC CHIP	0.22MF		25V
C617	1-135-177-21	TANTAL. CHIP	1MF	20%	20V
C618	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C619	1-162-955-11	CERAMIC CHIP	150PF	5%	50V
C620	1-126-607-11	ELECT CHIP	47MF	20%	4V
C621	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C622	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C623	1-135-201-11	TANTAL. CHIP	10MF	20%	4V
C624	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C625	1-124-778-00	ELECT CHIP	22MF	20%	6.3V
C626	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C627	1-135-201-11	TANTAL. CHIP	10MF	20%	4V
C628	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C629	1-135-180-21	TANTAL. CHIP	3.3MF	20%	6.3V
C630	1-135-180-21	TANTAL. CHIP	3.3MF	20%	6.3V
C631	1-126-607-11	ELECT CHIP	47MF	20%	4V

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description			Remark
C632	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C633	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C634	1-135-201-11	TANTAL. CHIP	10MF	20%	4V
C635	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C636	1-162-952-11	CERAMIC CHIP	82PF	5%	50V
C637	1-135-201-11	TANTAL. CHIP	10MF	20%	4V
C638	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C639	1-162-954-11	CERAMIC CHIP	120PF	5%	50V
C640	1-135-201-11	TANTAL. CHIP	10MF	20%	4V
C641	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C642	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C643	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C644	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C645	1-162-965-11	CERAMIC CHIP	0.0015MF	10%	50V
C646	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C647	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C648	1-126-607-11	ELECT CHIP	47MF	20%	4V
C649	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C650	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C651	1-135-201-11	TANTAL. CHIP	10MF	20%	4V
C652	1-162-950-11	CERAMIC CHIP	56PF	5%	50V
C653	1-162-944-11	CERAMIC CHIP	18PF	5%	50V
C655	1-163-135-00	CERAMIC CHIP	560PF	5%	50V
C656	1-162-950-11	CERAMIC CHIP	56PF	5%	50V
C657	1-135-201-11	TANTAL. CHIP	10MF	20%	4V
C658	1-162-944-11	CERAMIC CHIP	18PF	5%	50V
C659	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C660	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C663	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C664	1-124-778-00	ELECT CHIP	22MF	20%	6.3V
C665	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C666	1-164-361-11	CERAMIC CHIP	0.047MF		16V
C667	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C668	1-135-177-21	TANTAL. CHIP	1MF	20%	20V
C669	1-126-246-11	ELECT CHIP	220MF	20%	4V
C670	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C671	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C672	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C673	1-135-149-21	TANTAL. CHIP	2.2MF	20%	10V
C674	1-135-146-21	TANTAL. CHIP	0.68MF	20%	25V
C676	1-135-201-11	TANTAL. CHIP	10MF	20%	4V
C677	1-126-607-11	ELECT CHIP	47MF	20%	4V
C679	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C701	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C702	1-162-949-11	CERAMIC CHIP	47PF	5%	50V
C703	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C704	1-162-954-11	CERAMIC CHIP	120PF	5%	50V
C705	1-162-952-11	CERAMIC CHIP	82PF	5%	50V
C706	1-162-951-11	CERAMIC CHIP	68PF	5%	50V
C707	1-162-950-11	CERAMIC CHIP	56PF	5%	50V
C708	1-162-967-11	CERAMIC CHIP	0.0033MF	10%	50V
C709	1-162-957-11	CERAMIC CHIP	220PF	5%	50V
C710	1-162-953-11	CERAMIC CHIP	100PF	5%	50V
C711	1-162-955-11	CERAMIC CHIP	150PF	5%	50V
C712	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C713	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C714	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C715	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C716	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C717	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C718	1-126-607-11	ELECT CHIP	47MF	20%	4V
C719	1-162-926-11	CERAMIC CHIP	82PF	5%	50V
C720	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C721	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C722	1-135-177-21	TANTAL. CHIP	1MF	20%	20V

Ref.No	Part No.	Description			Remark
C723	1-162-995-11	CERAMIC CHIP	0.022MF		50V
C724	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C725	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C726	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C727	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C728	1-135-146-21	TANTAL. CHIP	0.68MF	20%	25V
C729	1-135-177-21	TANTAL. CHIP	1MF	20%	20V
C731	1-162-950-11	CERAMIC CHIP	56PF	5%	50V
C732	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C733	1-162-936-11	CERAMIC CHIP	5PF	0.25PF	50V
C749	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C750	1-162-947-11	CERAMIC CHIP	33PF	5%	50V
C801	1-164-361-11	CERAMIC CHIP	0.047MF		16V
C804	1-162-965-11	CERAMIC CHIP	0.0015MF	10%	50V
C805	1-162-958-11	CERAMIC CHIP	270PF	5%	50V
C806	1-162-950-11	CERAMIC CHIP	56PF	5%	50V
C807	1-162-951-11	CERAMIC CHIP	68PF	5%	50V
C809	1-162-946-11	CERAMIC CHIP	27PF	5%	50V
C810	1-162-951-11	CERAMIC CHIP	68PF	5%	50V
C813	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C819	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C820	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C821	1-124-778-00	ELECT CHIP	22MF	20%	6.3V
C823	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C824	1-162-959-11	CERAMIC CHIP	330PF	5%	50V
C825	1-164-145-11	CERAMIC CHIP	390PF	5%	50V
C826	1-164-634-11	CERAMIC CHIP	1MF		16V
C827	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C828	1-124-779-00	ELECT CHIP	10MF	20%	16V
C829	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C831	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C832	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C833	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C834	1-162-951-11	CERAMIC CHIP	68PF	5%	50V
C836	1-163-128-00	CERAMIC CHIP	300PF	5%	50V
C837	1-162-995-11	CERAMIC CHIP	0.022MF		50V
C838	1-162-948-11	CERAMIC CHIP	39PF	5%	50V
C839	1-162-943-11	CERAMIC CHIP	15PF	5%	50V
C840	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C841	1-162-995-11	CERAMIC CHIP	0.022MF		50V
C842	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C843	1-162-995-11	CERAMIC CHIP	0.022MF		50V
C844	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C845	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C846	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C847	1-162-942-11	CERAMIC CHIP	12PF	5%	50V
C850	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C851	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C852	1-163-116-00	CERAMIC CHIP	91PF	5%	50V
C854	1-163-104-00	CERAMIC CHIP	30PF	5%	50V
C855	1-162-951-11	CERAMIC CHIP	68PF	5%	50V
C856	1-162-955-11	CERAMIC CHIP	150PF	5%	50V
C859	1-162-954-11	CERAMIC CHIP	120PF	5%	50V
C863	1-162-952-11	CERAMIC CHIP	82PF	5%	50V
C901	1-164-361-11	CERAMIC CHIP	0.047MF		16V
C905	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C906	1-135-156-21	TANTAL. CHIP	6.8MF	20%	10V
C907	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C908	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C909	1-135-157-21	TANTAL. CHIP	10MF	20%	6.3V
C911	1-164-634-11	CERAMIC CHIP	1MF		16V
C912	1-164-634-11	CERAMIC CHIP	1MF		16V
C913	1-164-634-11	CERAMIC CHIP	1MF		16V
C921	1-164-634-11	CERAMIC CHIP	1MF		16V
C922	1-164-634-11	CERAMIC CHIP	1MF		16V

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description			Remark
C923	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C924	1-162-918-11	CERAMIC CHIP	18PF	5%	50V
C925	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C926	1-162-968-11	CERAMIC CHIP	0.0047MF	10%	50V
C927	1-164-634-11	CERAMIC CHIP	1MF		16V
C928	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C930	1-162-926-11	CERAMIC CHIP	82PF	5%	50V
C931	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C932	1-162-923-11	CERAMIC CHIP	47PF	5%	50V
C933	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C934	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C935	1-135-181-21	TANTAL CHIP	4.7MF	20%	6.3V
C936	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C937	1-135-181-21	TANTAL CHIP	4.7MF	20%	6.3V
C938	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C939	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C940	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C941	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C942	1-164-227-11	CERAMIC CHIP	0.022MF	10%	25V
C943	1-162-964-11	CERAMIC CHIP	0.001MF	10%	50V
C948	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C949	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C950	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C952	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C953	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C954	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C955	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C956	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C958	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C959	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C960	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C962	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C971	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C972	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C973	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C974	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C977	1-162-945-11	CERAMIC CHIP	22PF	5%	50V
C978	1-164-634-11	CERAMIC CHIP	1MF		16V
C979	1-164-360-11	CERAMIC CHIP	0.1MF		16V

CERAMIC FILTER

CF701	1-567-306-11	FILTER, CERAMIC

CONNECTOR

CN001	1-566-531-11	CONNECTOR, FPC (ZIF) 15P
CN002	1-569-030-11	CONNECTOR, FPC (ZIF) 21P
CN003	1-569-481-11	CONNECTOR, FPC 30P
CN004	1-569-633-61	CONNECTOR, BOARD TO BOARD 26P
CN005	1-569-631-41	CONNECTOR, BOARD TO BOARD 20P
CN006	1-569-632-41	CONNECTOR, BOARD TO BOARD 22P
CN007	1-566-532-11	CONNECTOR, FPC (ZIF) 16P
CN008	1-569-363-21	CONNECTOR, FPC 15P
CN009	1-566-531-11	CONNECTOR, FPC (ZIF) 15P
CN601	*1-566-095-11	PIN, BOARD TO BOARD 6P
CN701	1-566-528-21	CONNECTOR, FPC (ZIF) 12P
CN801	1-566-534-21	CONNECTOR, FPC (ZIF) 18P

VARIABLE CAPACITOR

CV101	1-141-331-11	CAP, VAR, TRIMMER (CHIP)

DIODE

Ref.No	Part No.	Description	Remark
D101	8-719-938-72	DIODE SB01-05CP	
D103	8-719-105-52	DIODE RD3.6M-B2	
D104	8-719-105-XX	DIODE RD6.2M-B1	
D107	8-719-941-09	DIODE DAP202U	
D108	8-719-404-40	DIODE MA121	
D199	8-719-404-40	DIODE MA121	
D199	8-719-911-19	DIODE 1SS119	
D201	8-719-941-86	DIODE DAN202U	
D202	8-719-404-40	DIODE MA121	
D203	8-719-404-40	DIODE MA121	
D204	8-719-941-09	DIODE DAP202U	
D205	8-719-941-09	DIODE DAP202U	
D301	8-719-941-86	DIODE DAN202U	
D401	8-719-938-78	DIODE SB10-05PCP	
D402	8-719-941-09	DIODE DAP202U	
D403	8-719-938-75	DIODE SB05-05CP	
D404	8-719-938-75	DIODE SB05-05CP	
D601	8-719-404-40	DIODE MA121	
D602	8-719-404-40	DIODE MA121	
D802	8-719-800-76	DIODE 1SS226	
D901	8-719-106-44	DIODE RD9.1M-B2	
D902	8-719-106-44	DIODE RD9.1M-B2	
D921	8-719-941-86	DIODE DAN202U	
D922	8-719-941-09	DIODE DAP202U	
D924	8-719-941-09	DIODE DAP202U	
D925	8-719-941-09	DIODE DAP202U	

FERRITE BEAD RING

FB101	1-543-256-11	BEAD, FERRITE
FB102	1-412-390-21	INDUCTOR CHIP 0UH
FB201	1-543-256-11	BEAD, FERRITE
FB202	1-543-256-11	BEAD, FERRITE
FB203	1-412-390-21	INDUCTOR CHIP 0UH
FB204	1-412-390-21	INDUCTOR CHIP 0UH
FB205	1-543-256-11	BEAD, FERRITE
FB921	1-412-390-21	INDUCTOR CHIP 0UH
FB925	1-412-390-21	INDUCTOR CHIP 0UH
FB926	1-412-390-21	INDUCTOR CHIP 0UH

FILTER

FL601	1-236-757-21	FILTER, LOW PASS (C)
FL603	1-236-751-21	FILTER, LOW PASS
FL701	1-236-575-11	B.P.F (PAL-M)
FL702	1-236-146-11	FILTER, BAND PASS
FL801	1-409-475-21	FILTER, TRAP

IC

IC101	8-752-816-99	IC CXP50116-088Q
IC102	8-759-990-78	IC S-81350AG-REG
IC103	8-759-940-33	IC S-8052ALO-LG-S
IC104	8-759-946-03	IC S-8054ALR-LN-S
IC105	8-759-720-23	IC AK93C57F-E1
IC106	8-759-009-22	IC MC14094BF
IC107	8-759-209-15	IC TC4SU69F
IC108	8-759-209-97	IC TC4S81F
IC109	8-759-209-97	IC TC4S81F
IC201	8-759-234-77	IC TC4S66F
IC202	8-759-234-77	IC TC4S66F
IC204	8-759-998-98	IC LM358DR
IC206	8-752-816-17	IC CXP80116-682Q
IC301	1-808-841-11	ATF HIC
IC302	8-759-100-97	IC UPC339G2
IC401	8-759-945-17	IC MB3775PF
IC402	8-759-998-94	IC LM311DR-E1
IC403	8-759-990-55	IC CXA8006M-E1
IC404	8-759-805-06	IC CXA1127M
IC405	8-759-107-68	IC CX20115A
IC601	8-752-036-19	IC CXA1207R
IC602	8-752-033-40	IC CXA1201Q
IC701	8-752-036-20	IC CXA1208R
IC802	8-759-012-00	IC MC10H116M

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark
IC803	8-759-998-32	IC CXD-2107M	
IC901	8-759-701-02	IC NJM2073M	
IC921	8-759-990-94	IC MB606199	
IC922	8-752-010-20	IC CX20102	
IC923	8-759-231-32	IC TC7S00F	
IC924	8-759-231-32	IC TC7S00F	

JACK

Ref.No	Part No.	Description	Remark
J101	1-563-282-11	JACK, SMALL TYPE	
J701	1-569-639-11	JACK, PIN 3P	

COIL

Ref.No	Part No.	Description	Remark
L102	1-410-993-11	INDUCTOR CHIP 1UH	
L103	1-410-993-11	INDUCTOR CHIP 1UH	
L104	1-410-993-11	INDUCTOR CHIP 1UH	
L105	1-410-993-11	INDUCTOR CHIP 1UH	
L106	1-410-993-11	INDUCTOR CHIP 1UH	
L107	1-410-993-11	INDUCTOR CHIP 1UH	
L201	1-408-789-21	INDUCTOR CHIP 100UH	
L203	1-410-993-11	INDUCTOR CHIP 1UH	
L204	1-410-993-11	INDUCTOR CHIP 1UH	
L205	1-410-993-11	INDUCTOR CHIP 1UH	
L206	1-410-993-11	INDUCTOR CHIP 1UH	
L207	1-410-993-11	INDUCTOR CHIP 1UH	
L208	1-410-993-11	INDUCTOR CHIP 1UH	
L209	1-410-993-11	INDUCTOR CHIP 1UH	
L210	1-410-993-11	INDUCTOR CHIP 1UH	
L211	1-410-993-11	INDUCTOR CHIP 1UH	
L212	1-410-993-11	INDUCTOR CHIP 1UH	
L401	1-424-104-11	COIL, CHOKE 10UH	
L402	1-410-337-11	INDUCTOR 1UH	
L403	1-424-104-11	COIL, CHOKE 10UH	
L404	1-424-104-11	COIL, CHOKE 10UH	
L405	1-424-106-11	COIL, CHOKE 47UH	
L406	1-424-104-11	COIL, CHOKE 10UH	
L407	1-424-106-11	COIL, CHOKE 47UH	
L408	1-424-105-11	COIL, CHOKE 22UH	
L409	1-408-789-21	INDUCTOR CHIP 100UH	
L601	1-412-032-11	INDUCTOR CHIP 100UH	
L602	1-410-388-21	INDUCTOR CHIP 39UH	
L603	1-410-390-11	INDUCTOR CHIP 56UH	
L604	1-410-393-11	INDUCTOR CHIP 100UH	
L605	1-410-379-31	INDUCTOR CHIP 6.8UH	
L606	1-410-390-11	INDUCTOR CHIP 56UH	
L607	1-410-393-11	INDUCTOR CHIP 100UH	
L608	1-412-029-11	INDUCTOR CHIP 10UH	
L609	1-412-029-11	INDUCTOR CHIP 10UH	
L610	1-412-032-11	INDUCTOR CHIP 100UH	
L611	1-412-032-11	INDUCTOR CHIP 100UH	
L701	1-410-393-11	INDUCTOR CHIP 100UH	
L702	1-410-393-11	INDUCTOR CHIP 100UH	
L703	1-410-656-11	INDUCTOR CHIP 150UH	
L704	1-410-655-31	INDUCTOR CHIP 120UH	
L705	1-410-393-11	INDUCTOR CHIP 100UH	
L706	1-410-385-11	INDUCTOR CHIP 22UH	
L707	1-410-385-11	INDUCTOR CHIP 22UH	
L708	1-410-377-31	INDUCTOR CHIP 4.7UH	
L801	1-410-167-41	INDUCTOR CHIP 820UH	
L802	1-410-657-21	INDUCTOR CHIP 180UH	
L803	1-412-032-11	INDUCTOR CHIP 100UH	
L804	1-412-032-11	INDUCTOR CHIP 100UH	
L805	1-410-379-31	INDUCTOR CHIP 6.8UH	
L806	1-410-378-11	INDUCTOR CHIP 5.6UH	
L808	1-410-386-11	INDUCTOR CHIP 27UH	
L809	1-410-380-31	INDUCTOR CHIP 8.2UH	
L811	1-410-380-31	INDUCTOR CHIP 8.2UH	
L813	1-410-393-11	INDUCTOR CHIP 100UH	
L814	1-410-383-31	INDUCTOR CHIP 15UH	
L817	1-410-658-31	INDUCTOR CHIP 220UH	
L818	1-410-656-11	INDUCTOR CHIP 150UH	
L819	1-412-280-31	INDUCTOR 330UH	
L820	1-412-029-11	INDUCTOR CHIP 10UH	
L821	1-410-375-11	INDUCTOR CHIP 3.3UH	
L901	1-412-032-11	INDUCTOR CHIP 100UH	
L902	1-412-031-11	INDUCTOR CHIP 47UH	
L922	1-412-058-11	INDUCTOR CHIP 10UH	
L923	1-412-058-11	INDUCTOR CHIP 10UH	

IC LINK

Ref.No	Part No.	Description	Remark
PS201⚠	1-532-605-00	LINK, IC (ICP-N10)	

TRANSISTOR

Ref.No	Part No.	Description	Remark
Q101	8-729-905-18	TRANSISTOR DTC144EU	
Q102	8-729-905-35	TRANSISTOR 2SC4081R	
Q103	8-729-220-93	TRANSISTOR 2SK209G	
Q104	8-729-905-18	TRANSISTOR DTC144EU	
Q105	8-729-905-35	TRANSISTOR 2SC4081R	
Q106	8-729-905-23	TRANSISTOR 2SA1576R	
Q107 ⚠	8-729-220-93	TRANSISTOR 2SK209G	
Q108 ⚠	8-729-220-93	TRANSISTOR 2SK209G	
Q109	8-729-905-12	TRANSISTOR DTA144EU	
Q110	8-729-905-35	TRANSISTOR 2SC4081R	
Q111	8-729-905-22	TRANSISTOR 2SA1576Q	
Q112	8-729-905-22	TRANSISTOR 2SA1576Q	
Q113	8-729-921-08	TRANSISTOR DTC144TU	
Q114	8-729-403-24	TRANSISTOR XN4210	
Q115	8-729-921-08	TRANSISTOR DTC144TU	
Q116	8-729-403-24	TRANSISTOR XN4210	
Q117	8-729-907-00	TRANSISTOR DTC114EU	
Q118	8-729-920-59	TRANSISTOR IMX2	
Q201	8-729-905-35	TRANSISTOR 2SC4081R	
Q202	8-729-905-35	TRANSISTOR 2SC4081R	
Q203	8-729-921-08	TRANSISTOR DTC144TU	
Q204	8-729-902-96	TRANSISTOR FMS1	
Q205	8-729-903-82	TRANSISTOR FMW2	
Q206	8-729-907-00	TRANSISTOR DTC114EU	
Q207	8-729-905-35	TRANSISTOR 2SC4081R	
Q208	8-729-820-46	TRANSISTOR 2SB1202FAS	
Q209	8-729-905-35	TRANSISTOR 2SC4081R	
Q210	8-729-403-24	TRANSISTOR XN4210	
Q212	8-729-905-12	TRANSISTOR DTA144EU	
Q213	8-729-905-18	TRANSISTOR DTC144EU	
Q214	8-729-905-18	TRANSISTOR DTC144EU	
Q215	8-729-905-18	TRANSISTOR DTC144EU	
Q216	8-729-905-35	TRANSISTOR 2SC4081R	
Q301	8-729-905-23	TRANSISTOR 2SA1576R	
Q302	8-729-905-35	TRANSISTOR 2SC4081R	
Q303	8-729-905-23	TRANSISTOR 2SA1576R	
Q304	8-729-905-35	TRANSISTOR 2SC4081R	
Q305	8-729-905-18	TRANSISTOR DTC144EU	
Q306	8-729-905-18	TRANSISTOR DTC144EU	
Q401	8-729-905-35	TRANSISTOR 2SC4081R	
Q402	8-729-901-04	TRANSISTOR DTA114EK	
Q403	8-729-905-35	TRANSISTOR 2SC4081R	
Q404 ⚠	8-729-805-25	TRANSISTOR 2SB1121	
Q405	8-729-905-35	TRANSISTOR 2SC4081R	
Q406	8-729-905-61	TRANSISTOR DTC124EU	
Q407	8-729-905-35	TRANSISTOR 2SC4081R	
Q408 ⚠	8-729-805-25	TRANSISTOR 2SB1121	
Q409 ⚠	8-729-805-25	TRANSISTOR 2SB1121	

When indicating parts by reference number, please include the board name.

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No	Part No.	Description	Remark
Q410	⚠ 8-729-805-25	TRANSISTOR 2SB1121	
Q411	⚠ 8-729-805-25	TRANSISTOR 2SB1121	
Q412	8-729-905-35	TRANSISTOR 2SC4081R	
Q413	8-729-907-00	TRANSISTOR DTC114EU	
Q415	8-729-905-18	TRANSISTOR DTC144EU	
Q416	8-729-905-12	TRANSISTOR DTA144EU	
Q418	⚠ 8-729-162-44	TRANSISTOR 2SB624-V4	
Q419	8-729-907-00	TRANSISTOR DTC114EU	
Q420	8-729-907-00	TRANSISTOR DTC114EU	
Q601	8-729-905-23	TRANSISTOR 2SA1576R	
Q602	8-729-905-35	TRANSISTOR 2SC4081R	
Q603	8-729-905-35	TRANSISTOR 2SC4081R	
Q604	8-729-905-12	TRANSISTOR DTA144EU	
Q605	8-729-905-18	TRANSISTOR DTC144EU	
Q606	8-729-905-35	TRANSISTOR 2SC4081R	
Q607	8-729-905-12	TRANSISTOR DTA144EU	
Q608	8-729-905-18	TRANSISTOR DTC144EU	
Q609	8-729-905-23	TRANSISTOR 2SA1576R	
Q610	8-729-905-35	TRANSISTOR 2SC4081R	
Q611	8-729-905-23	TRANSISTOR 2SA1576R	
Q612	8-729-905-35	TRANSISTOR 2SC4081R	
Q613	8-729-905-35	TRANSISTOR 2SC4081R	
Q614	8-729-905-35	TRANSISTOR 2SC4081R	
Q615	8-729-905-35	TRANSISTOR 2SC4081R	
Q616	8-729-905-23	TRANSISTOR 2SA1576R	
Q617	8-729-905-35	TRANSISTOR 2SC4081R	
Q618	8-729-141-48	TRANSISTOR 2SB624-BV345	
Q619	8-729-905-18	TRANSISTOR DTC144EU	
Q620	8-729-907-00	TRANSISTOR DTC114EU	
Q625	8-729-905-12	TRANSISTOR DTA144EU	
Q626	8-729-905-18	TRANSISTOR DTC144EU	
Q627	8-729-905-23	TRANSISTOR 2SA1576R	
Q628	8-729-920-48	TRANSISTOR IMH2	
Q629	8-729-905-35	TRANSISTOR 2SC4081R	
Q631	8-729-905-12	TRANSISTOR DTA144EU	
Q632	8-729-905-18	TRANSISTOR DTC144EU	
Q701	8-729-905-35	TRANSISTOR 2SC4081R	
Q702	8-729-905-23	TRANSISTOR 2SA1576R	
Q703	8-729-905-35	TRANSISTOR 2SC4081R	
Q704	8-729-905-18	TRANSISTOR DTC144EU	
Q705	8-729-905-18	TRANSISTOR DTC144EU	
Q706	8-729-905-35	TRANSISTOR 2SC4081R	
Q707	8-729-905-18	TRANSISTOR DTC144EU	
Q801	8-729-905-18	TRANSISTOR DTC144EU	
Q802	8-729-905-35	TRANSISTOR 2SC4081R	
Q803	8-729-905-35	TRANSISTOR 2SC4081R	
Q804	8-729-905-35	TRANSISTOR 2SC4081R	
Q806	8-729-905-35	TRANSISTOR 2SC4081R	
Q807	8-729-905-35	TRANSISTOR 2SC4081R	
Q808	8-729-905-35	TRANSISTOR 2SC4081R	
Q810	8-729-905-35	TRANSISTOR 2SC4081R	
Q811	8-729-905-35	TRANSISTOR 2SC4081R	
Q813	8-729-905-18	TRANSISTOR DTC144EU	
Q814	8-729-905-23	TRANSISTOR 2SA1576R	
Q815	8-729-905-35	TRANSISTOR 2SC4081R	
Q817	8-729-905-18	TRANSISTOR DTC144EU	
Q818	⚠ 8-729-822-51	TRANSISTOR 2SK1469	
Q819	8-729-141-48	TRANSISTOR 2SB624-BV345	
Q820	8-729-905-18	TRANSISTOR DTC144EU	
Q821	8-729-202-38	TRANSISTOR 2SC3326N	
Q822	8-729-905-35	TRANSISTOR 2SC4081R	
Q823	8-729-905-23	TRANSISTOR 2SA1576R	
Q824	8-729-905-35	TRANSISTOR 2SC4081R	
Q825	8-729-905-23	TRANSISTOR 2SA1576R	
Q826	8-729-905-35	TRANSISTOR 2SC4081R	

Ref.No	Part No.	Description	Remark
Q827	8-729-905-35	TRANSISTOR 2SC4081R	
Q828	8-729-202-38	TRANSISTOR 2SC3326N	
Q829	8-729-905-35	TRANSISTOR 2SC4081R	
Q830	8-729-905-35	TRANSISTOR 2SC4081R	
Q831	8-729-920-48	TRANSISTOR IMH2	
Q833	8-729-905-35	TRANSISTOR 2SC4081R	
Q834	8-729-905-18	TRANSISTOR DTC144EU	
Q835	8-729-905-18	TRANSISTOR DTC144EU	
Q901	8-729-905-35	TRANSISTOR 2SC4081R	
Q902	8-729-141-48	TRANSISTOR 2SB624-BV345	
Q911	8-729-905-35	TRANSISTOR 2SC4081R	
Q912	8-729-905-35	TRANSISTOR 2SC4081R	
Q921	8-729-905-18	TRANSISTOR DTC144EU	
Q922	8-729-905-35	TRANSISTOR 2SC4081R	
Q923	8-729-905-35	TRANSISTOR 2SC4081R	
Q927	8-729-905-61	TRANSISTOR DTC124EU	
Q928	8-729-924-36	TRANSISTOR DTC143EU	
Q929	8-729-905-15	TRANSISTOR DTC144WU	
Q930	8-729-905-23	TRANSISTOR 2SA1576R	
Q931	8-729-905-35	TRANSISTOR 2SC4081R	
Q932	8-729-907-00	TRANSISTOR DTC114EU	

RESISTOR

Ref.No	Part No.	Description				Remark
R101	1-216-845-11	METAL GLAZE	100K	5%	1/16W	
R102	1-216-821-11	METAL GLAZE	1K	5%	1/16W	
R103	1-216-851-11	METAL GLAZE	330K	5%	1/16W	
R104	1-216-842-11	METAL GLAZE	56K	5%	1/16W	
R105	1-216-833-11	METAL GLAZE	10K	5%	1/16W	
R106	1-216-833-11	METAL GLAZE	10K	5%	1/16W	
R107	1-216-845-11	METAL GLAZE	100K	5%	1/16W	
R108	1-216-833-11	METAL GLAZE	10K	5%	1/16W	
R109	1-216-833-11	METAL GLAZE	10K	5%	1/16W	
R110	1-216-833-11	METAL GLAZE	10K	5%	1/16W	
R112	1-216-845-11	METAL GLAZE	100K	5%	1/16W	
R113	1-216-845-11	METAL GLAZE	100K	5%	1/16W	
R114	1-216-845-11	METAL GLAZE	100K	5%	1/16W	
R115	1-216-821-11	METAL GLAZE	1K	5%	1/16W	
R118	1-216-842-11	METAL GLAZE	56K	5%	1/16W	
R127	1-216-845-11	METAL GLAZE	100K	5%	1/16W	
R129	1-216-815-11	METAL GLAZE	330	5%	1/16W	
R130	1-216-861-11	METAL GLAZE	2.2M	5%	1/16W	
R131	1-216-834-11	METAL GLAZE	12K	5%	1/16W	
R132	1-216-861-11	METAL GLAZE	2.2M	5%	1/16W	
R133	1-216-861-11	METAL GLAZE	2.2M	5%	1/16W	
R135	1-216-839-11	METAL GLAZE	33K	5%	1/16W	
R136	1-216-845-11	METAL GLAZE	100K	5%	1/16W	
R137	1-216-843-11	METAL GLAZE	68K	5%	1/16W	
R138	1-216-845-11	METAL GLAZE	100K	5%	1/16W	
R139	1-216-845-11	METAL GLAZE	100K	5%	1/16W	
R140	1-216-845-11	METAL GLAZE	100K	5%	1/16W	
R141	1-216-845-11	METAL GLAZE	100K	5%	1/16W	
R144	1-216-833-11	METAL GLAZE	10K	5%	1/16W	
R145	1-216-849-11	METAL GLAZE	220K	5%	1/16W	
R146	1-216-822-11	METAL GLAZE	1.2K	5%	1/16W	
R147	1-216-025-00	METAL GLAZE	100	5%	1/10W	
R155	1-216-849-11	METAL GLAZE	220K	5%	1/16W	
R156	1-216-834-11	METAL GLAZE	12K	5%	1/16W	
R157	1-216-841-11	METAL GLAZE	47K	5%	1/16W	
R158	1-216-834-11	METAL GLAZE	12K	5%	1/16W	
R159	1-216-834-11	METAL GLAZE	12K	5%	1/16W	
R160	1-216-834-11	METAL GLAZE	12K	5%	1/16W	
R161	1-216-834-11	METAL GLAZE	12K	5%	1/16W	
R162	1-216-834-11	METAL GLAZE	12K	5%	1/16W	
R163	1-216-834-11	METAL GLAZE	12K	5%	1/16W	
R164	1-216-834-11	METAL GLAZE	12K	5%	1/16W	

When indicating parts by reference number, please include the board name.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref.No	Part No.	Description			Remark
R165	1-216-834-11	METAL GLAZE	12K	5%	1/16W
R166	1-216-834-11	METAL GLAZE	12K	5%	1/16W
R167	1-216-834-11	METAL GLAZE	12K	5%	1/16W
R168	1-216-834-11	METAL GLAZE	12K	5%	1/16W
R169	1-216-834-11	METAL GLAZE	12K	5%	1/16W
R170	1-216-834-11	METAL GLAZE	12K	5%	1/16W
R171	1-216-834-11	METAL GLAZE	12K	5%	1/16W
R172	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R173	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R174	1-216-841-11	METAL GLAZE	47K	5%	1/16W
R175	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R179	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R181	1-216-864-11	METAL GLAZE	0	5%	1/16W
R182	1-216-864-11	METAL GLAZE	0	5%	1/16W
R184	1-216-864-11	METAL GLAZE	0	5%	1/16W
R186	1-216-864-11	METAL GLAZE	0	5%	1/16W
R188	1-216-864-11	METAL GLAZE	0	5%	1/16W
R190	1-216-864-11	METAL GLAZE	0	5%	1/16W
R191	1-216-857-11	METAL GLAZE	1M	5%	1/16W
R194	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R195	1-216-857-11	METAL GLAZE	1M	5%	1/16W
R201	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R202	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R203	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R204	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R205	1-216-838-11	METAL GLAZE	27K	5%	1/16W
R206	1-216-857-11	METAL GLAZE	1M	5%	1/16W
R207	1-216-851-11	METAL GLAZE	330K	5%	1/16W
R208	1-216-832-11	METAL GLAZE	8.2K	5%	1/16W
R209	1-216-838-11	METAL GLAZE	27K	5%	1/16W
R210	1-216-843-11	METAL GLAZE	68K	5%	1/16W
R211	1-216-843-11	METAL GLAZE	68K	5%	1/16W
R212	1-216-828-11	METAL GLAZE	3.9K	5%	1/16W
R213	1-216-192-00	METAL GLAZE	560	5%	1/8W
R214	1-216-172-00	METAL GLAZE	82	5%	1/8W
R215	1-216-835-11	METAL GLAZE	15K	5%	1/16W
R216	1-216-828-11	METAL GLAZE	3.9K	5%	1/16W
R217	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R218	1-216-857-11	METAL GLAZE	1M	5%	1/16W
R219	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R220	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R221	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R222	1-216-853-11	METAL GLAZE	470K	5%	1/16W
R223	1-216-853-11	METAL GLAZE	470K	5%	1/16W
R224	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R225	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W
R226	1-216-830-11	METAL GLAZE	5.6K	5%	1/16W
R227	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R228	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R229	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R230	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R231	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R232	1-216-842-11	METAL GLAZE	56K	5%	1/16W
R233	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R234	1-216-842-11	METAL GLAZE	56K	5%	1/16W
R235	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R236	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R237	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R238	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R239	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R241	1-216-336-11	METAL GLAZE	47K	1%	1/10W
R242	1-216-336-11	METAL GLAZE	47K	1%	1/10W
R250	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R251	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R252	1-216-833-11	METAL GLAZE	10K	5%	1/16W

Ref.No	Part No.	Description			Remark
R253	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R262	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R264	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R265	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R267	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R268	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R269	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R270	1-216-194-00	METAL GLAZE	680	5%	1/8W
R271	1-216-194-00	METAL GLAZE	680	5%	1/8W
R272	1-216-194-00	METAL GLAZE	680	5%	1/8W
R273	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R274	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R275	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R276	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R277	1-216-827-11	METAL GLAZE	3.3K	5%	1/16W
R279	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R280	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R281	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R282	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R285	1-216-864-11	METAL GLAZE	0	5%	1/16W
R299	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R301	1-216-827-11	METAL GLAZE	3.3K	5%	1/16W
R302	1-216-827-11	METAL GLAZE	3.3K	5%	1/16W
R303	1-216-827-11	METAL GLAZE	3.3K	5%	1/16W
R304	1-216-864-11	METAL GLAZE	0	5%	1/16W
R305	1-216-854-11	METAL GLAZE	560K	5%	1/16W
R306	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R307	1-216-827-11	METAL GLAZE	3.3K	5%	1/16W
R308	1-216-864-11	METAL GLAZE	0	5%	1/16W
R312	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R313	1-216-847-11	METAL GLAZE	150K	5%	1/16W
R314	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R316	1-216-839-11	METAL GLAZE	33K	5%	1/16W
R317	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R318	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R319	1-216-809-11	METAL GLAZE	100	5%	1/16W
R320	1-216-811-11	METAL GLAZE	150	5%	1/16W
R321	1-216-831-11	METAL GLAZE	6.8K	5%	1/16W
R322	1-216-838-11	METAL GLAZE	27K	5%	1/16W
R323	1-216-857-11	METAL GLAZE	1M	5%	1/16W
R325	1-216-826-11	METAL GLAZE	2.7K	5%	1/16W
R326	1-216-824-11	METAL GLAZE	1.8K	5%	1/16W
R327	1-216-857-11	METAL GLAZE	1M	5%	1/16W
R328	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R329	1-216-826-11	METAL GLAZE	2.7K	5%	1/16W
R330	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R331	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R332	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R342	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R343	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W
R401	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R402	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R403	1-216-831-11	METAL GLAZE	6.8K	5%	1/16W
R404	1-216-831-11	METAL GLAZE	6.8K	5%	1/16W
R405	1-216-828-11	METAL GLAZE	3.9K	5%	1/16W
R407	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W
R408	1-216-836-11	METAL GLAZE	18K	5%	1/16W
R409	1-216-033-00	METAL GLAZE	220	5%	1/10W
R410	1-216-033-00	METAL GLAZE	220	5%	1/10W
R411	1-216-045-00	METAL GLAZE	680	5%	1/10W
R412	1-216-841-11	METAL GLAZE	47K	5%	1/16W
R413	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W
R414	1-216-841-11	METAL GLAZE	47K	5%	1/16W
R415	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W
R416	1-216-045-00	METAL GLAZE	680	5%	1/10W

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark
R417	1-216-831-11	METAL GLAZE 6.8K 5% 1/16W	
R418	1-216-824-11	METAL GLAZE 1.8K 5% 1/16W	
R419	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R420	1-216-841-11	METAL GLAZE 47K 5% 1/16W	
R421	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R422	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R423	1-216-823-11	METAL GLAZE 1.5K 5% 1/16W	
R424	1-216-823-11	METAL GLAZE 1.5K 5% 1/16W	
R425	1-216-845-11	METAL GLAZE 100K 5% 1/16W	
R426	1-216-830-11	METAL GLAZE 5.6K 5% 1/16W	
R427	1-216-824-11	METAL GLAZE 1.8K 5% 1/16W	
R428	1-216-837-11	METAL GLAZE 22K 5% 1/16W	
R429	1-216-843-11	METAL GLAZE 68K 5% 1/16W	
R430	1-216-823-11	METAL GLAZE 1.5K 5% 1/16W	
R431	1-216-789-11	METAL GLAZE 2.2 5% 1/16W	
R432	1-216-789-11	METAL GLAZE 2.2 5% 1/16W	
R433	1-216-845-11	METAL GLAZE 100K 5% 1/16W	
R434	1-216-830-11	METAL GLAZE 5.6K 5% 1/16W	
R435	1-216-789-11	METAL GLAZE 2.2 5% 1/16W	
R436	1-216-815-11	METAL GLAZE 330 5% 1/16W	
R437	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R438	1-216-838-11	METAL GLAZE 27K 5% 1/16W	
R439	1-216-838-11	METAL GLAZE 27K 5% 1/16W	
R440	1-216-838-11	METAL GLAZE 27K 5% 1/16W	
R441	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R443	1-216-836-11	METAL GLAZE 18K 5% 1/16W	
R444	1-216-848-11	METAL GLAZE 180K 5% 1/16W	
R445	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R446	1-216-848-11	METAL GLAZE 180K 5% 1/16W	
R447	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R448	1-216-827-11	METAL GLAZE 3.3K 5% 1/16W	
R451	1-216-845-11	METAL GLAZE 100K 5% 1/16W	
R452	1-216-839-11	METAL GLAZE 33K 5% 1/16W	
R453	1-216-827-11	METAL GLAZE 3.3K 5% 1/16W	
R454	1-216-841-11	METAL GLAZE 47K 5% 1/16W	
R455	1-216-845-11	METAL GLAZE 100K 5% 1/16W	
R456	1-216-801-11	METAL GLAZE 22 5% 1/16W	
R460	1-217-671-11	METAL GLAZE 1 5% 1/10W	
R461	1-217-671-11	METAL GLAZE 1 5% 1/10W	
R462	1-217-671-11	METAL GLAZE 1 5% 1/10W	
R463	1-217-671-11	METAL GLAZE 1 5% 1/10W	
R464	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R466	1-216-837-11	METAL GLAZE 22K 5% 1/16W	
R467	1-216-828-11	METAL GLAZE 3.9K 5% 1/16W	
R468	1-216-831-11	METAL GLAZE 6.8K 5% 1/16W	
R469	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R470	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R471	1-216-864-11	METAL GLAZE 0 5% 1/16W	
R601	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R602	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R603	1-216-845-11	METAL GLAZE 100K 5% 1/16W	
R604	1-216-825-11	METAL GLAZE 2.2K 5% 1/16W	
R605	1-216-859-11	METAL GLAZE 1.5M 5% 1/16W	
R606	1-216-857-11	METAL GLAZE 1M 5% 1/16W	
R607	1-216-855-11	METAL GLAZE 680K 5% 1/16W	
R608	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R609	1-216-845-11	METAL GLAZE 100K 5% 1/16W	
R610	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R611	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R612	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R613	1-216-837-11	METAL GLAZE 22K 5% 1/16W	
R614	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R615	1-216-832-11	METAL GLAZE 8.2K 5% 1/16W	
R616	1-216-832-11	METAL GLAZE 8.2K 5% 1/16W	
R617	1-216-827-11	METAL GLAZE 3.3K 5% 1/16W	

Ref.No	Part No.	Description	Remark
R618	1-216-822-11	METAL GLAZE 1.2K 5% 1/16W	
R619	1-216-015-00	METAL GLAZE 39 5% 1/10W	
R620	1-216-827-11	METAL GLAZE 3.3K 5% 1/16W	
R625	1-216-838-11	METAL GLAZE 27K 5% 1/16W	
R626	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R627	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R628	1-216-839-11	METAL GLAZE 33K 5% 1/16W	
R629	1-216-842-11	METAL GLAZE 56K 5% 1/16W	
R630	1-216-817-11	METAL GLAZE 470 5% 1/16W	
R631	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R632	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R633	1-216-013-00	METAL GLAZE 33 5% 1/10W	
R634	1-216-304-11	METAL GLAZE 3.3 5% 1/10W	
R635	1-216-825-11	METAL GLAZE 2.2K 5% 1/16W	
R636	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R637	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R638	1-216-825-11	METAL GLAZE 2.2K 5% 1/16W	
R639	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R640	1-216-830-11	METAL GLAZE 5.6K 5% 1/16W	
R641	1-216-836-11	METAL GLAZE 18K 5% 1/16W	
R642	1-216-839-11	METAL GLAZE 33K 5% 1/16W	
R643	1-216-699-11	METAL CHIP 100K 0.50% 1/10W	
R645	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R646	1-216-822-11	METAL GLAZE 1.2K 5% 1/16W	
R647	1-216-830-11	METAL GLAZE 5.6K 5% 1/16W	
R648	1-216-819-11	METAL GLAZE 680 5% 1/16W	
R649	1-216-819-11	METAL GLAZE 680 5% 1/16W	
R650	1-216-816-11	METAL GLAZE 390 5% 1/16W	
R651	1-216-817-11	METAL GLAZE 470 5% 1/16W	
R652	1-216-837-11	METAL GLAZE 22K 5% 1/16W	
R653	1-216-815-11	METAL GLAZE 330 5% 1/16W	
R654	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R655	1-216-817-11	METAL GLAZE 470 5% 1/16W	
R656	1-216-825-11	METAL GLAZE 2.2K 5% 1/16W	
R657	1-216-811-11	METAL GLAZE 150 5% 1/16W	
R658	1-216-813-11	METAL GLAZE 220 5% 1/16W	
R659	1-216-815-11	METAL GLAZE 330 5% 1/16W	
R661	1-216-801-11	METAL GLAZE 22 5% 1/16W	
R662	1-216-820-11	METAL GLAZE 820 5% 1/16W	
R663	1-216-819-11	METAL GLAZE 680 5% 1/16W	
R664	1-216-826-11	METAL GLAZE 2.7K 5% 1/16W	
R665	1-216-817-11	METAL GLAZE 470 5% 1/16W	
R668	1-216-809-11	METAL GLAZE 100 5% 1/16W	
R669	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R670	1-216-809-11	METAL GLAZE 100 5% 1/16W	
R671	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R672	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R673	1-216-825-11	METAL GLAZE 2.2K 5% 1/16W	
R674	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R675	1-216-831-11	METAL GLAZE 6.8K 5% 1/16W	
R676	1-216-825-11	METAL GLAZE 2.2K 5% 1/16W	
R679	1-216-825-11	METAL GLAZE 2.2K 5% 1/16W	
R684	1-216-857-11	METAL GLAZE 1M 5% 1/16W	
R685	1-216-857-11	METAL GLAZE 1M 5% 1/16W	
R686	1-216-828-11	METAL GLAZE 3.9K 5% 1/16W	
R687	1-216-829-11	METAL GLAZE 4.7K 5% 1/16W	
R688	1-216-845-11	METAL GLAZE 100K 5% 1/16W	
R689	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R690	1-216-830-11	METAL GLAZE 5.6K 5% 1/16W	
R691	1-216-837-11	METAL GLAZE 22K 5% 1/16W	
R692	1-216-837-11	METAL GLAZE 22K 5% 1/16W	
R694	1-216-825-11	METAL GLAZE 2.2K 5% 1/16W	
R695	1-216-825-11	METAL GLAZE 2.2K 5% 1/16W	
R698	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R699	1-216-822-11	METAL GLAZE 1.2K 5% 1/16W	

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description			Remark
R701	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W
R702	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W
R704	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R705	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R707	1-216-818-11	METAL GLAZE	560	5%	1/16W
R708	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R709	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W
R710	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R711	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W
R712	1-216-822-11	METAL GLAZE	1.2K	5%	1/16W
R714	1-216-822-11	METAL GLAZE	1.2K	5%	1/16W
R715	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R717	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R718	1-216-828-11	METAL GLAZE	3.9K	5%	1/16W
R719	1-216-831-11	METAL GLAZE	6.8K	5%	1/16W
R720	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W
R721	1-216-832-11	METAL GLAZE	8.2K	5%	1/16W
R723	1-216-830-11	METAL GLAZE	5.6K	5%	1/16W
R724	1-216-831-11	METAL GLAZE	6.8K	5%	1/16W
R725	1-216-837-11	METAL GLAZE	22K	5%	1/16W
R726	1-216-834-11	METAL GLAZE	12K	5%	1/16W
R727	1-216-817-11	METAL GLAZE	470	5%	1/16W
R728	1-216-864-11	METAL GLAZE	0	5%	1/16W
R730	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W
R753	1-216-823-11	METAL GLAZE	1.5K	5%	1/16W
R754	1-216-864-11	METAL GLAZE	0	5%	1/16W
R755	1-216-809-11	METAL GLAZE	100	5%	1/16W
R801	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R804	1-216-811-11	METAL GLAZE	150	5%	1/16W
R805	1-216-831-11	METAL GLAZE	6.8K	5%	1/16W
R806	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R807	1-216-816-11	METAL GLAZE	390	5%	1/16W
R808	1-216-818-11	METAL GLAZE	560	5%	1/16W
R809	1-216-823-11	METAL GLAZE	1.5K	5%	1/16W
R810	1-216-819-11	METAL GLAZE	680	5%	1/16W
R811	1-216-835-11	METAL GLAZE	15K	5%	1/16W
R812	1-216-837-11	METAL GLAZE	22K	5%	1/16W
R813	1-216-841-11	METAL GLAZE	47K	5%	1/16W
R814	1-216-811-11	METAL GLAZE	150	5%	1/16W
R815	1-216-813-11	METAL GLAZE	220	5%	1/16W
R816	1-216-837-11	METAL GLAZE	22K	5%	1/16W
R817	1-216-841-11	METAL GLAZE	47K	5%	1/16W
R818	1-216-841-11	METAL GLAZE	47K	5%	1/16W
R819	1-216-837-11	METAL GLAZE	22K	5%	1/16W
R820	1-216-841-11	METAL GLAZE	47K	5%	1/16W
R821	1-216-811-11	METAL GLAZE	150	5%	1/16W
R822	1-216-823-11	METAL GLAZE	1.5K	5%	1/16W
R823	1-216-841-11	METAL GLAZE	47K	5%	1/16W
R824	1-216-837-11	METAL GLAZE	22K	5%	1/16W
R825	1-216-835-11	METAL GLAZE	15K	5%	1/16W
R826	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R827	1-216-841-11	METAL GLAZE	47K	5%	1/16W
R829	1-216-813-11	METAL GLAZE	220	5%	1/16W
R830	1-216-837-11	METAL GLAZE	22K	5%	1/16W
R831	1-216-841-11	METAL GLAZE	47K	5%	1/16W
R832	1-216-844-11	METAL GLAZE	82K	5%	1/16W
R833	1-216-022-00	METAL GLAZE	75	5%	1/10W
R834	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R835	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R836	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W
R837	1-216-849-11	METAL GLAZE	220K	5%	1/16W
R838	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R839	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R840	1-216-817-11	METAL GLAZE	470	5%	1/16W
R841	1-216-817-11	METAL GLAZE	470	5%	1/16W
R842	1-216-837-11	METAL GLAZE	22K	5%	1/16W
R843	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W
R844	1-216-820-11	METAL GLAZE	820	5%	1/16W
R845	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W
R846	1-216-841-11	METAL GLAZE	47K	5%	1/16W
R847	1-216-817-11	METAL GLAZE	470	5%	1/16W
R849	1-216-839-11	METAL GLAZE	33K	5%	1/16W
R850	1-216-834-11	METAL GLAZE	12K	5%	1/16W
R851	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R852	1-216-809-11	METAL GLAZE	100	5%	1/16W
R855	1-216-813-11	METAL GLAZE	220	5%	1/16W
R856	1-216-817-11	METAL GLAZE	470	5%	1/16W
R857	1-216-817-11	METAL GLAZE	470	5%	1/16W
R860	1-216-813-11	METAL GLAZE	220	5%	1/16W
R861	1-216-818-11	METAL GLAZE	560	5%	1/16W
R862	1-216-819-11	METAL GLAZE	680	5%	1/16W
R863	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R864	1-216-831-11	METAL GLAZE	6.8K	5%	1/16W
R865	1-216-832-11	METAL GLAZE	8.2K	5%	1/16W
R867	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R868	1-216-841-11	METAL GLAZE	47K	5%	1/16W
R869	1-216-817-11	METAL GLAZE	470	5%	1/16W
R870	1-216-816-11	METAL GLAZE	390	5%	1/16W
R873	1-216-841-11	METAL GLAZE	47K	5%	1/16W
R875	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R876	1-216-817-11	METAL GLAZE	470	5%	1/16W
R877	1-216-817-11	METAL GLAZE	470	5%	1/16W
R878	1-216-812-11	METAL GLAZE	180	5%	1/16W
R879	1-216-818-11	METAL GLAZE	560	5%	1/16W
R880	1-216-817-11	METAL GLAZE	470	5%	1/16W
R882	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R885	1-216-817-11	METAL GLAZE	470	5%	1/16W
R886	1-216-817-11	METAL GLAZE	470	5%	1/16W
R889	1-216-837-11	METAL GLAZE	22K	5%	1/16W
R890	1-216-837-11	METAL GLAZE	22K	5%	1/16W
R891	1-216-864-11	METAL GLAZE	0	5%	1/16W
R892	1-216-837-11	METAL GLAZE	22K	5%	1/16W
R893	1-216-841-11	METAL GLAZE	47K	5%	1/16W
R894	1-216-811-11	METAL GLAZE	150	5%	1/16W
R895	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R901	1-216-789-11	METAL GLAZE	2.2	5%	1/16W
R902	1-216-789-11	METAL GLAZE	2.2	5%	1/16W
R906	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R907	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R908	1-216-815-11	METAL GLAZE	330	5%	1/16W
R909	1-216-825-11	METAL GLAZE	2.2K	5%	1/16W
R911	1-216-841-11	METAL GLAZE	47K	5%	1/16W
R912	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R913	1-216-861-11	METAL GLAZE	2.2M	5%	1/16W
R914	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R915	1-216-845-11	METAL GLAZE	100K	5%	1/16W
R916	1-216-849-11	METAL GLAZE	220K	5%	1/16W
R921	1-216-857-11	METAL GLAZE	1M	5%	1/16W
R923	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W
R924	1-216-832-11	METAL GLAZE	8.2K	5%	1/16W
R925	1-218-270-11	METAL GLAZE	1.1K	5%	1/16W
R926	1-216-822-11	METAL GLAZE	1.2K	5%	1/16W
R927	1-216-645-11	METAL CHIP	560	0.50%	1/10W
R928	1-216-833-11	METAL GLAZE	10K	5%	1/16W
R932	1-216-834-11	METAL GLAZE	12K	5%	1/16W
R933	1-216-816-11	METAL GLAZE	390	5%	1/16W
R935	1-216-829-11	METAL GLAZE	4.7K	5%	1/16W
R936	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R937	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R938	1-216-821-11	METAL GLAZE	1K	5%	1/16W

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark
R939	1-216-845-11	METAL GLAZE 100K 5% 1/16W	
R940	1-216-001-00	METAL GLAZE 10 5% 1/10W	
R941	1-216-819-11	METAL GLAZE 680 5% 1/16W	
R942	1-216-814-11	METAL GLAZE 270 5% 1/16W	
R944	1-216-819-11	METAL GLAZE 680 5% 1/16W	
R946	1-216-827-11	METAL GLAZE 3.3K 5% 1/16W	
R948	1-216-825-11	METAL GLAZE 2.2K 5% 1/16W	
R950	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R952	1-216-845-11	METAL GLAZE 100K 5% 1/16W	
R953	1-216-819-11	METAL GLAZE 680 5% 1/16W	
R954	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R955	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R956	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R958	1-216-829-11	METAL GLAZE 4.7K 5% 1/16W	
R959	1-216-845-11	METAL GLAZE 100K 5% 1/16W	
R961	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R963	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R965	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R968	1-216-829-11	METAL GLAZE 4.7K 5% 1/16W	
R969	1-216-833-11	METAL GLAZE 10K 5% 1/16W	
R970	1-216-816-11	METAL GLAZE 390 5% 1/16W	
R971	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R972	1-216-845-11	METAL GLAZE 100K 5% 1/16W	
R974	1-216-841-11	METAL GLAZE 47K 5% 1/16W	
R978	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R979	1-216-821-11	METAL GLAZE 1K 5% 1/16W	
R986	1-216-835-11	METAL GLAZE 15K 5% 1/16W	

NETWORK

Ref.No	Part No.	Description	Remark
RB101	1-236-412-11	NETWORK, RES 1.0K	
RB102	1-236-433-11	NETWORK, RES 56K	
RB103	1-236-433-11	NETWORK, RES 56K	
RB104	1-236-424-11	NETWORK, RES 10K	
RB105	1-236-424-11	NETWORK, RES 10K	
RB106	1-236-424-11	NETWORK, RES 10K	
RB107	1-236-424-11	NETWORK, RES 10K	
RB108	1-236-424-11	NETWORK, RES 10K	
RB109	1-236-424-11	NETWORK, RES 10K	
RB110	1-236-424-11	NETWORK, RES 10K	
RB111	1-236-412-11	NETWORK, RES 1.0K	
RB112	1-236-424-11	NETWORK, RES 10K	
RB113	1-236-424-11	NETWORK, RES 10K	
RB115	1-236-412-11	NETWORK, RES 1.0K	
RB116	1-236-412-11	NETWORK, RES 1.0K	
RB117	1-236-412-11	NETWORK, RES 1.0K	
RB118	1-236-412-11	NETWORK, RES 1.0K	
RB119	1-236-412-11	NETWORK, RES 1.0K	
RB120	1-236-412-11	NETWORK, RES 1.0K	
RB121	1-236-412-11	NETWORK, RES 1.0K	
RB122	1-236-424-11	NETWORK, RES 10K	
RB123	1-236-424-11	NETWORK, RES 10K	
RB130	1-236-424-11	NETWORK, RES 10K	
RB131	1-236-424-11	NETWORK, RES 10K	
RB132	1-236-436-11	NETWORK, RES 100K	
RB201	1-236-412-11	NETWORK, RES 1.0K	
RB202	1-236-412-11	NETWORK, RES 1.0K	
RB203	1-236-412-11	NETWORK, RES 1.0K	
RB204	1-236-412-11	NETWORK, RES 1.0K	
RB205	1-236-412-11	NETWORK, RES 1.0K	
RB206	1-236-412-11	NETWORK, RES 1.0K	
RB207	1-236-412-11	NETWORK, RES 1.0K	
RB208	1-236-412-11	NETWORK, RES 1.0K	
RB209	1-236-412-11	NETWORK, RES 1.0K	
RB210	1-236-412-11	NETWORK, RES 1.0K	
RB211	1-236-412-11	NETWORK, RES 1.0K	
RB212	1-236-412-11	NETWORK, RES 1.0K	
RB213	1-236-412-11	NETWORK, RES 1.0K	
RB214	1-236-424-11	NETWORK, RES 10K	
RB215	1-236-424-11	NETWORK, RES 10K	
RB216	1-236-424-11	NETWORK, RES 10K	
RB217	1-236-424-11	NETWORK, RES 10K	
RB218	1-236-424-11	NETWORK, RES 10K	
RB219	1-236-424-11	NETWORK, RES 10K	
RB220	1-236-424-11	NETWORK, RES 10K	
RB221	1-236-424-11	NETWORK, RES 10K	
RB222	1-236-424-11	NETWORK, RES 10K	
RB223	1-236-412-11	NETWORK, RES 1.0K	
RB224	1-236-424-11	NETWORK, RES 10K	
RB225	1-236-412-11	NETWORK, RES 1.0K	
RB227	1-236-412-11	NETWORK, RES 1.0K	
RB801	1-236-412-11	NETWORK, RES 1.0K	
RB802	1-236-412-11	NETWORK, RES 1.0K	
RB803	1-236-412-11	NETWORK, RES 1.0K	
RB804	1-236-412-11	NETWORK, RES 1.0K	
RB921	1-236-412-11	NETWORK, RES 1.0K	
RB922	1-236-412-11	NETWORK, RES 1.0K	
RB923	1-236-412-11	NETWORK, RES 1.0K	
RB924	1-236-424-11	NETWORK, RES 10K	
RB925	1-236-412-11	NETWORK, RES 1.0K	
RB926	1-236-412-11	NETWORK, RES 1.0K	
RB927	1-236-420-11	NETWORK, RES 4.7K	
RB929	1-236-412-11	NETWORK, RES 1.0K	
RB930	1-236-412-11	NETWORK, RES 1.0K	

VARIABLE RESISTOR

Ref.No	Part No.	Description	Remark
RV301	1-238-090-11	RES, ADJ CERMET 10K	
RV401	1-238-087-11	RES, ADJ CERMET 1K	
RV402	1-238-089-11	RES, ADJ CERMET 4.7K	
RV601	1-238-092-11	RES, ADJ CERMET 47K	
RV602	1-238-089-11	RES, ADJ CERMET 4.7K	
RV603	1-238-088-11	RES, ADJ, CERMET 2.2K	
RV604	1-238-091-11	RES, ADJ CERMET 22K	
RV605	1-238-088-11	RES, ADJ, CERMET 2.2K	
RV606	1-238-086-11	RES, ADJ CERMET 470	
RV607	1-238-088-11	RES, ADJ, CERMET 2.2K	
RV608	1-238-092-11	RES, ADJ CERMET 47K	
RV609	1-238-087-11	RES, ADJ CERMET 1K	
RV701	1-238-087-11	RES, ADJ CERMET 1K	
RV802	1-238-087-11	RES, ADJ CERMET 1K	
RV923	1-230-868-11	RES, ADJ, METAL GLAZE 2.2K	

THERMISTOR

Ref.No	Part No.	Description	Remark
TH301	1-800-200-00	THERMISTOR	

CRYSTAL

Ref.No	Part No.	Description	Remark
X101	1-527-997-21	VIBRATOR, CRYSTAL	
X102	1-577-118-11	VIBRATOR, LITHIUM NIOBATE	
X201	1-577-349-21	VIBRATOR, CRYSTAL	
X701	1-577-080-11	VIBRATOR, CRYSTAL	
X921	1-577-290-21	VIBRATOR, CRYSTAL	

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A-7061-935-A CC-32 BOARD, COMPLETE (Ref. No. 5000 series)

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CAPACITOR

Ref.No	Part No.	Description	Remark
C001	1-162-946-11	CERAMIC CHIP 27PF 5% 50V	
C003	1-135-180-21	TANTAL CHIP 3.3MF 20% 6.3V	
C004	1-162-974-11	CERAMIC CHIP 0.01MF 50V	
C005	1-162-946-11	CERAMIC CHIP 27PF 5% 50V	

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description			Remark
C006	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C007	1-162-946-11	CERAMIC CHIP	27PF	5%	50V
C008	1-135-180-21	TANTAL CHIP	3.3MF	20%	6.3V
C009	1-162-946-11	CERAMIC CHIP	27PF	5%	50V
C010	1-164-360-11	CERAMIC CHIP	0.1MF		16V
C011	1-162-946-11	CERAMIC CHIP	27PF	5%	50V
C013	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C015	1-135-180-21	TANTAL CHIP	3.3MF	20%	6.3V
C016	1-162-946-11	CERAMIC CHIP	27PF	5%	50V
C017	1-162-974-11	CERAMIC CHIP	0.01MF		50V
C018	1-162-946-11	CERAMIC CHIP	27PF	5%	50V

IC

Ref.No	Part No.	Description
IC001	8-752-329-49	IC CXL5502M-2

COIL

Ref.No	Part No.	Description	
L001	1-410-988-11	INDUCTOR CHIP	0.39UH
L002	1-410-988-11	INDUCTOR CHIP	0.39UH
L003	1-412-031-11	INDUCTOR CHIP	47UH
L004	1-410-988-11	INDUCTOR CHIP	0.39UH
L005	1-410-988-11	INDUCTOR CHIP	0.39UH
L008	1-412-031-11	INDUCTOR CHIP	47UH
L009	1-410-988-11	INDUCTOR CHIP	0.39UH
L010	1-410-988-11	INDUCTOR CHIP	0.39UH

RESISTOR

Ref.No	Part No.	Description			
R001	1-216-857-11	METAL GLAZE	1M	5%	1/16W
R002	1-216-823-11	METAL GLAZE	1.5K	5%	1/16W
R003	1-216-821-11	METAL GLAZE	1K	5%	1/16W
R004	1-216-844-11	METAL GLAZE	82K	5%	1/16W
R005	1-216-864-11	METAL GLAZE	0	5%	1/16W
R007	1-216-864-11	METAL GLAZE	0	5%	1/16W

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*A-7062-317-A TU-123 BOARD, COMPLETE (Ref. No. 6000 series)

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Part No.	Description
3-744-166-01	HOLDER, ANTENNA
3-746-907-01	LID, TDD SHIELD CASE
3-746-908-01	LID, REAR, TDD SHIELD CASE
3-746-915-01	LID, REAR, TU SHIELD CASE
3-741-147-01	CAP, PS SHIELD

CAPACITOR

Ref.No	Part No.	Description			Remark
C001	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C002	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C004	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C005	1-135-157-21	TANTAL CHIP	10MF	20%	6.3V
C006	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C007	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C008	1-164-005-11	CERAMIC CHIP	0.47MF		25V
C009	1-126-205-11	ELECT CHIP	47MF	20%	6.3V
C010	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C011	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C012	1-163-035-00	CERAMIC CHIP	0.047MF		50V
C015	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C019	1-163-090-00	CERAMIC CHIP	7PF	0.25PF	50V
C020	1-163-090-00	CERAMIC CHIP	7PF	0.25PF	50V
C022	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C023	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C024	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C025	1-135-217-21	TANTAL CHIP	15MF	20%	6.3V
C026	1-135-217-21	TANTAL CHIP	15MF	20%	6.3V
C027	1-135-149-21	TANTAL CHIP	2.2MF	20%	10V
C029	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C030	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C031	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C032	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C033	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C034	1-135-157-21	TANTAL CHIP	10MF	20%	6.3V
C035	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C038	1-163-115-00	CERAMIC CHIP	82PF	5%	50V
C039	1-163-163-00	CERAMIC CHIP	18PF	5%	50V
C041	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V
C042	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C044	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C045	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V
C046	1-135-181-21	TANTAL CHIP	4.7MF	20%	6.3V
C048	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C049	1-126-205-11	ELECT CHIP	47MF	20%	6.3V
C055	1-135-217-21	TANTAL CHIP	15MF	20%	6.3V
C056	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C057	1-135-157-21	TANTAL CHIP	10MF	20%	6.3V
C058	1-163-017-00	CERAMIC CHIP	0.0047MF	10%	50V
C059	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C060	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C061	1-163-103-00	CERAMIC CHIP	27PF	5%	50V
C070	1-135-157-21	TANTAL CHIP	10MF	20%	6.3V
C071	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C072	1-135-181-21	TANTAL CHIP	4.7MF	20%	6.3V
C073	1-135-181-21	TANTAL CHIP	4.7MF	20%	6.3V
C074	1-135-181-21	TANTAL CHIP	4.7MF	20%	6.3V
C075	1-136-707-11	FILM CHIP	0.012MF	5%	25
C076	1-136-703-11	FILM CHIP	0.0056MF	5%	25V
C078	1-135-202-21	TANTAL CHIP	22MF	20%	4V
C079	1-136-699-11	FILM CHIP	0.0027MF	5%	25V
C080	1-135-181-21	TANTAL CHIP	4.7MF	20%	6.3V
C081	1-135-157-21	TANTAL CHIP	10MF	20%	6.3V
C082	1-135-181-21	TANTAL CHIP	4.7MF	20%	6.3V
C083	1-135-181-21	TANTAL CHIP	4.7MF	20%	6.3V
C084	1-135-177-21	TANTAL CHIP	1MF	20%	25V
C085	1-135-180-21	TANTAL CHIP	3.3MF	20%	6.3V
C086	1-163-809-11	CERAMIC CHIP	0.047MF	10%	25V
C088	1-164-634-11	CERAMIC CHIP	1MF		16V
C089	1-164-634-11	CERAMIC CHIP	1MF		16V
C090	1-135-177-21	TANTAL CHIP	1MF	20%	25V
C091	1-135-177-21	TANTAL CHIP	1MF	20%	25V
C110	1-135-157-21	TANTAL CHIP	10MF	20%	6.3V
C111	1-163-105-00	CERAMIC CHIP	33PF	5%	50V
C112	1-163-036-00	CERAMIC CHIP	0.068MF		50V
C113	1-163-036-00	CERAMIC CHIP	0.068MF		50V
C114	1-163-036-00	CERAMIC CHIP	0.068MF		50V
C115	1-163-121-00	CERAMIC CHIP	150PF	5%	50V
C501	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V
C502	1-163-133-00	CERAMIC CHIP	470PF	5%	50V
C503	1-135-217-21	TANTAL CHIP	15MF	20%	6.3V
C504	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C505	1-163-011-11	CERAMIC CHIP	0.0015MF	10%	50V
C506	1-126-204-11	ELECT CHIP	47MF	20%	16V
C507	1-135-156-21	TANTAL CHIP	6.8MF	20%	10V
C508	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C509	1-124-779-00	ELECT CHIP	10MF	20%	16V
C510	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C511	1-126-200-11	ELECT CHIP	10MF	20%	35V
C512	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C513	1-164-232-11	CERAMIC CHIP	0.01MF		50V
C514	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C515	1-135-156-21	TANTAL CHIP	6.8MF	20%	10V
C516	1-163-038-00	CERAMIC CHIP	0.1MF		25V

When indicating parts by reference number, please include the board name.

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Ref.No	Part No.	Description			Remark
C517	1-135-153-21	TANTAL CHIP	2.2MF	20%	25V
C518	1-163-038-00	CERAMIC CHIP	0.1MF		25V
C520	1-126-602-11	ELECT CHIP	3.3MF	20%	50V
C521	1-163-036-00	CERAMIC CHIP	0.068MF		50V
C522	1-135-155-21	TANTAL CHIP	4.7MF	20%	16V
C524	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C525	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C526	1-163-117-00	CERAMIC CHIP	100PF	5%	50V
C527	1-163-037-11	CERAMIC CHIP	0.022MF	10%	25V

CERAMIC FILTER

Ref.No	Part No.	Description
CF001	1-409-332-00	CERAMIC TRAP (4.5MHZ)
CF002	1-577-610-11	DISCRIMINATOR, CERAMIC
CF003	1-577-559-11	FILTER, CERAMIC

CONNECTOR

Ref.No	Part No.	Description
CN001	1-569-634-11	CONNECTOR, BOARD TO BOARD 30P
CN002	1-566-523-11	CONNECTOR, FPC (ZIF) 7P
CN003	*1-565-541-11	PIN, CONNECTOR (PC BOARD) 2P

DIODE

Ref.No	Part No.	Description
D001	8-719-400-18	DIODE MA152WK
D501	8-719-400-18	DIODE MA152WK
D502	8-719-400-18	DIODE MA152WK
D503	8-719-400-18	DIODE MA152WK
D504	8-719-400-18	DIODE MA152WK
D601	8-719-106-44	DIODE RD9.1M-B2

FERRITE BEAD RING

Ref.No	Part No.	Description	
FB501	1-412-390-21	INDUCTOR CHIP	0UH
FB502	1-412-390-21	INDUCTOR CHIP	0UH

IC

Ref.No	Part No.	Description
IC001	8-759-634-94	IC M52018FP
IC002	8-759-634-94	IC M52018FP
IC003	8-752-035-70	IC CXA1124AQ
IC004	8-759-030-05	IC LM393ML
IC501	8-759-979-50	IC FA7610N
IC502	8-759-157-40	IC UPC574J

ISOLATION

Ref.No	Part No.	Description
IU001	1-466-330-11	AMPLIFIER, ISOLATION (RA-1)

JACK

Ref.No	Part No.	Description
J001	1-507-921-00	JACK
J601	1-563-282-21	JACK, SMALL TYPE
J602	1-563-282-21	JACK, SMALL TYPE

COIL

Ref.No	Part No.	Description	
L002	1-412-168-11	INDUCTOR	0.33UH
L003	1-410-989-11	INDUCTOR CHIP	0.47UH
L004	1-412-029-11	INDUCTOR CHIP	10UH
L006	1-412-029-11	INDUCTOR CHIP	10UH
L009	1-410-383-31	INDUCTOR CHIP	15UH
L010	1-410-382-31	INDUCTOR CHIP	12UH
L013	1-410-998-31	INDUCTOR CHIP	2.7UH
L014	1-410-994-11	INDUCTOR CHIP	1.2UH
L015	1-412-029-11	INDUCTOR CHIP	10UH
L016	1-412-029-11	INDUCTOR CHIP	10UH
L017	1-412-031-11	INDUCTOR CHIP	47UH
L501	1-412-028-11	INDUCTOR CHIP	4.7UH
L502	1-412-028-11	INDUCTOR CHIP	4.7UH
L503	1-412-028-11	INDUCTOR CHIP	4.7UH
L505	1-412-030-11	INDUCTOR CHIP	22UH

TRANSISTOR

Ref.No	Part No.	Description
Q001	8-729-230-99	TRANSISTOR 2SC2669
Q003	8-729-901-47	TRANSISTOR DTA143EK
Q004	8-729-901-47	TRANSISTOR DTA143EK
Q005	8-729-901-47	TRANSISTOR DTA143EK
Q006	8-729-100-66	TRANSISTOR 2SC1623
Q009	8-729-100-66	TRANSISTOR 2SC1623
Q010	8-729-216-22	TRANSISTOR 2SA1162
Q012	8-729-100-66	TRANSISTOR 2SC1623
Q015	8-729-100-66	TRANSISTOR 2SC1623
Q020	8-729-901-01	TRANSISTOR DTC144EK
Q104	8-729-100-66	TRANSISTOR 2SC1623
Q105	8-729-601-58	TRANSISTOR 2SC3053
Q501	8-729-421-15	TRANSISTOR 2SD1119-Q
Q502	8-729-901-06	TRANSISTOR DTA144EK
Q503	8-729-901-01	TRANSISTOR DTC144EK

RESISTOR

Ref.No	Part No.	Description			Remark
R002	1-216-295-00	METAL GLAZE	0	5%	1/10W
R003	1-216-295-00	METAL GLAZE	0	5%	1/10W
R006	1-216-021-00	METAL GLAZE	68	5%	1/10W
R007	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R008	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R009	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R010	1-216-019-00	METAL GLAZE	56	5%	1/10W
R015	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R016	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R017	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R018	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R022	1-216-091-00	METAL GLAZE	56K	5%	1/10W
R023	1-216-091-00	METAL GLAZE	56K	5%	1/10W
R024	1-216-295-00	METAL GLAZE	0	5%	1/10W
R025	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R026	1-216-025-00	METAL GLAZE	100	5%	1/10W
R027	1-216-037-00	METAL GLAZE	330	5%	1/10W
R028	1-216-037-00	METAL GLAZE	330	5%	1/10W
R029	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R030	1-216-025-00	METAL GLAZE	100	5%	1/10W
R032	1-216-025-00	METAL GLAZE	100	5%	1/10W
R033	1-216-027-00	METAL GLAZE	120	5%	1/10W
R036	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R038	1-216-121-00	METAL GLAZE	1M	5%	1/10W
R039	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R040	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R041	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W
R042	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R045	1-216-079-00	METAL GLAZE	18K	5%	1/10W
R046	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R047	1-216-079-00	METAL GLAZE	18K	5%	1/10W
R048	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R049	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R052	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R053	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R054	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R055	1-216-033-00	METAL GLAZE	220	5%	1/10W
R056	1-216-045-00	METAL GLAZE	680	5%	1/10W
R057	1-216-037-00	METAL GLAZE	330	5%	1/10W
R058	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R059	1-216-049-00	METAL GLAZE	1K	5%	1/10W
R074	1-216-691-11	METAL CHIP	47K	0.50%	1/10W
R075	1-216-089-00	METAL GLAZE	47K	5%	1/10W
R076	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R077	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R078	1-216-063-00	METAL GLAZE	3.9K	5%	1/10W
R079	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark
R080	1-216-690-11	METAL CHIP 43K 0.50% 1/10W	
R082	1-216-121-00	METAL GLAZE 1M 5% 1/10W	
R083	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R084	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R085	1-216-748-11	METAL GLAZE 39K 5% 1/10W	
R086	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
R087	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R088	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R089	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R092	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R093	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R102	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R103	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R104	1-216-057-00	METAL GLAZE 2.2K 5% 1/10W	
R105	1-216-109-00	METAL GLAZE 330K 5% 1/10W	
R106	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R107	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R108	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R109	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R110	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R501	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R502	1-216-091-00	METAL GLAZE 56K 5% 1/10W	
R503	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W	
R504	1-216-113-00	METAL GLAZE 470K 5% 1/10W	
R505	1-216-117-00	METAL GLAZE 680K 5% 1/10W	
R506	1-216-748-11	METAL GLAZE 39K 5% 1/10W	
R507	1-216-103-00	METAL GLAZE 180K 5% 1/10W	
R508	1-216-001-00	METAL GLAZE 10 5% 1/10W	
R509	1-216-105-00	METAL GLAZE 220K 5% 1/10W	
R511	1-216-009-00	METAL GLAZE 22 5% 1/10W	
R512	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R513	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R514	1-216-097-00	METAL GLAZE 100K 5% 1/10W	
R516	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R517	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R518	1-216-043-00	METAL GLAZE 560 5% 1/10W	
R520	1-216-067-00	METAL GLAZE 5.6K 5% 1/10W	
R521	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R601	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R602	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R603	1-216-025-00	METAL GLAZE 100 5% 1/10W	
R604	1-216-025-00	METAL GLAZE 100 5% 1/10W	
		VARIABLE RESISTOR	
RV001	1-238-089-11	RES, ADJ CERMET 4.7K	
RV003	1-238-090-11	RES, ADJ CERMET 10K	
RV004	1-238-090-11	RES, ADJ CERMET 10K	
RV005	1-238-089-11	RES, ADJ CERMET 4.7K	
RV006	1-238-092-11	RES, ADJ CERMET 47K	
RV007	1-238-091-11	RES, ADJ CERMET 22K	
RV501	1-238-087-11	RES, ADJ CERMET 1K	
		FILTER	
SWF001	1-579-111-11	FILTER, SAW	
		COIL	
T001	1-460-077-11	COIL	
T002	1-460-076-11	COIL	
T003	1-460-076-11	COIL	
T004	1-460-076-11	COIL	
		TRANSFORMER	
T501	1-450-107-11	TRANSFORMER, DC-DC CONVERTER	

Ref.No	Part No.	Description	Remark
		TUNER	
TU001	1-465-453-11	TUNER, ET (BT-KA301)	

* *

Ref.No	Part No.	Description	Remark
	*1-634-347-11	UC-6 BOARD, COMPLETE *****************	(Ref. No. 8000 series)
	3-746-939-01	INSULATOR, UC	
		CONNECTOR	
CN001	1-566-529-11	CONNECTOR, FPC (ZIF) 13P	
CN002	1-566-527-11	CONNECTOR, FPC (ZIF) 11P	
CN003	1-566-547-11	CONNECTOR, FPC (NON ZIF) 15P	

* *

Ref.No	Part No.	Description	Remark
	*1-634-345-11	CN-6 BOARD, COMPLETE *****************	(Ref. No. 3000 series)
		CONNECTOR	
CN601	1-566-544-41	CONNECTOR, FPC (NON ZIF) 12P	
CN602	1-565-527-11	PIN, CONNECTOR (PC BOARD) 2P	
		DIODE	
D602	8-719-106-43	DIODE RD9.1M-B1	
D603	8-719-106-43	DIODE RD9.1M-B1	
D604	8-719-106-43	DIODE RD9.1M-B1	
D605	8-719-106-43	DIODE RD9.1M-B1	
D606	8-719-106-43	DIODE RD9.1M-B1	
D608	8-719-105-91	DIODE RD5.6M-B2	
		JACK	
J601	1-562-952-11	CONNECTOR 12P	

* *

Ref.No	Part No.	Description	Remark
	A-7071-210-A	DC-22 BOARD, COMPLETE *****************	(Ref. No. 8000 series)
	1-575-823-11	CABLE, FLAT (1.0MM PITCH) 16P	
	*3-744-170-01	HOLDER, DC	
	3-746-959-01	SPACER, DC	
		FUSE	
F701	⚠1-532-777-21	FUSE, MICRO (SECONDARY) 1.25A 125V	
F702	⚠1-532-777-21	FUSE, MICRO (SECONDARY) 1.25A 125V	
F703	⚠1-532-777-21	FUSE, MICRO (SECONDARY) 1.25A 125V	
F704	⚠1-532-777-21	FUSE, MICRO (SECONDARY) 1.25A 125V	
F705	⚠1-532-777-21	FUSE, MICRO (SECONDARY) 1.25A 125V	
F706	⚠1-532-777-21	FUSE, MICRO (SECONDARY) 1.25A 125V	
		JACK	
J701	1-568-727-11	JACK, (DC IN)	
J702	1-537-241-11	TERMINAL BOARD (BATTERY)	

* *

Note:	Note:
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

Ref.No	Part No.	Description	Remark
	*A-7071-211-A	KB-10 (A) BOARD, COMPLETE *****************	(Ref. No. 8000 series)
	*3-744-130-01	HOLDER (PC), LED	
		CONNECTOR	
CN802	1-566-760-11	PIN, CONNECTOR (PC BOARD) 5P	
		DIODE	
D801	8-719-970-40	DIODE GL-1EG11	
D803	8-719-918-65	DIODE GL-1PR102	
D804	8-719-918-65	DIODE GL-1PR102	
D805	8-719-918-65	DIODE GL-1PR102	
D808	8-719-951-22	DIODE IMN10	
D809	8-719-951-22	DIODE IMN10	
D810	8-719-104-34	DIODE 1S2836	
		TRANSISTOR	
Q801	8-729-403-24	TRANSISTOR XN4210	
Q802	8-729-403-24	TRANSISTOR XN4210	
Q803	8-729-403-24	TRANSISTOR XN4210	
Q804	8-729-920-48	TRANSISTOR IMH2	
		RESISTOR	
R801	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R803	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R804	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R805	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R807	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R808	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
		SWITCH	
S801	1-572-344-11	SWITCH, SLIDE (POWER)	
S802	1-572-078-11	SWITCH, TACTILE (CHANNEL −)	
S803	1-572-078-11	SWITCH, TACTILE (CHANNEL +)	
S805	1-571-102-11	SWITCH, SLIDE (EJECT)	
S806	1-572-078-11	SWITCH, TACTILE (REW)	
S807	1-572-078-11	SWITCH, TACTILE (FF)	
S808	1-572-078-11	SWITCH, TACTILE (PLAY)	
S809	1-572-078-11	SWITCH, TACTILE (STOP)	
S810	1-572-078-11	SWITCH, TACTILE (PAUSE)	
S811	1-571-102-11	SWITCH, SLIDE (REC)	
S812	1-572-078-11	SWITCH, TACTILE (STEP)	
S813	1-572-078-11	SWITCH, TACTILE (INDEX MODE)	

****

Ref.No	Part No.	Description	Remark
	*1-634-346-11	SB-3 BOARD ********	(Ref. No. 6000 series)
		CONNECTOR	
CN901	1-566-539-11	CONNECTOR, FPC (NON ZIF) 7P	
		RESISTOR	
R903	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R904	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R905	1-216-101-00	METAL GLAZE 150K 5% 1/10W	
R906	1-216-077-00	METAL GLAZE 15K 5% 1/10W	
R907	1-216-081-00	METAL GLAZE 22K 5% 1/10W	
R908	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
		SWITCH	
S903	1-572-078-11	SWITCH, TACTILE (INDEX MARK)	
S904	1-572-078-11	SWITCH, TACTILE (INDEX ERASE)	
S905	1-572-078-11	SWITCH, TACTILE (SP/LP)	
S906	1-572-078-11	SWITCH, TACTILE (CLEAR)	
S907	1-572-078-11	SWITCH, TACTILE (POSITION)	
S908	1-572-078-11	SWITCH, TACTILE (PRESET)	
S909	1-572-078-11	SWITCH, TACTILE (SEEK)	
S910	1-572-078-11	SWITCH, TACTILE (INPUT SELECT)	
S911	1-571-275-31	SWITCH, SLIDE (AUTO STEREO)	

****

ACCESSORIES & PACKING MATERIALS

****

Ref.No	Part No.	Description	Remark
	1-417-173-11	DISTRIBUTOR, ANTENNA	
	⚠1-528-174-31	BATTERY, LITHIUM (CR2032 TYPE)	
	2-366-919-00	BAG, PROTECTION	
	3-701-625-00	BAG, POLYETHYLENE	
	3-728-996-01	CASE, SOFT	
	*3-744-184-01	CUSHION (UPPER)	
	*3-744-185-01	CUSHION (LOWER)	
	3-751-853-21	MANUAL, INSTRUCTION (ENGLISH)	
	3-751-853-31	MANUAL, INSTRUCTION (FRENCH)(CND MODEL)	

When indicating parts by reference number, please include the board name.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

* *

MISCELLANEOUS

* * * * * * * * * * *

Ref.No	Part No.	Description	Remark
	⚠1-466-333-11	INVERTER UNIT, DC-AC	
	1-466-334-11	SWITCH BLOCK, CONTROL	
	1-544-323-11	SPEAKER	
	1-569-346-11	CONNECTOR, FPC (TRANSLATION) 10P	
	1-569-347-11	CONNECTOR, FPC (TRANSLATION) 13P	
	1-572-253-11	SWITCH, SLIDE (ENCODER)	
	1-575-856-11	CABLE, FLAT (1.0MM PITCH) 7 CORE	
	1-575-857-11	CABLE, FLAT (1.0MM PITCH) 12 CORE	
	1-575-858-11	CABLE, FLAT (1.0MM PITCH) 16 CORE (LCD FLEXIBLE)	
	1-575-859-11	CABLE, FLAT (1.0MM PITCH) 15 CORE	
	1-628-060-12	FP-89 FLEXIBLE BOARD	
	1-628-061-12	FP-90 FLEXIBLE BOARD	
	1-634-994-11	FP-271 FLEXIBLE BOARD	
	1-634-995-11	FP-272 FLEXIBLE BOARD	
	1-634-996-11	FP-273 FLEXIBLE BOARD	
	1-634-997-11	FP-274 FLEXIBLE BOARD	
	1-808-505-12	SENSOR (DEW)	
AN901	1-501-456-11	ANTENNA, TELESCOPIC	
BL901	1-518-668-11	TUBE UNIT, FLUORECENT	
D301	8-719-820-44	PHOTO COUPLER TLP907-0 (SONY2)	
D302	8-719-940-81	DIODE GL452S	
D303	8-719-820-44	PHOTO COUPLER TLP907-0 (SONY2)	
LCD901	1-809-002-11	DISPLAY MODULE, LIQUID CRYSTAL	
M902	8-835-331-01	MOTOR, DC U-22A (CAPSTAN)	
M903	A-7040-208-A	MOTOR ASSY, THREADING (LOADING)	
Q301	8-729-906-48	EE-TP109	
Q302	8-729-906-48	EE-TP109	
S302	1-572-298-11	SWITCH, PUSH (ME/MP, MP HG, REC PROOF)	
S901	1-571-099-11	SWITCH (CASSETTE DOWN)	

HARDWARE

SCREW

Ref.No	Part No.	Description	Remark
	7-627-553-37	SCREW (M2X3), SPECIAL HEAD	
	7-627-555-88	SCREW (M1.4X1.8)	

PRECISION SCREW

Ref.No	Part No.	Description	Remark
	7-627-553-18	SCREW,PRECISION +P 2X2	
	7-627-555-88	SCREW, PRECISION +P 1.4X1.8	
	7-627-452-48	SCREW,PRECISION +RK 2X2.5	
	7-627-553-37	PRECISION SCREW +P 2X3 TYPE 3	
	7-627-553-68	SCREW, PRECISION +P 2X6 TYPE3	

NUT

Ref.No	Part No.	Description	Remark
	7-684-023-04	N 3, TYPE 2	

WASHER

Ref.No	Part No.	Description	Remark
	7-623-208-22	SW 3,TYPE 2	
	7-688-003-01	W 3, SMALL	

When indicating parts by reference number, please include the board name.

Note:	**Note:**
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

SECTION 7
MECHANICAL ADJUSTMENTS

For Mechanical Adjustments

Refer to mechanical adjustment (8 mm Video MECHANICAL ADJUSTMENT MANUAL III) manual for the adjustments and checks of mechanism section and the mechanical parts replacement. (9-972-732-11)

For setting of the track shift mode, however, refer to the following.

7-1. SETTING THE TRACK SHIFT MODE

[Setting Method]

1) Setting the test mode* 0011 (Jig switching position 3)

CN802

1	TEST B
2	GND
3	TEST A
4	TEST C
5	TEST D

Jig switching position 3

*Refer to 「8-1-7. Test mode」.

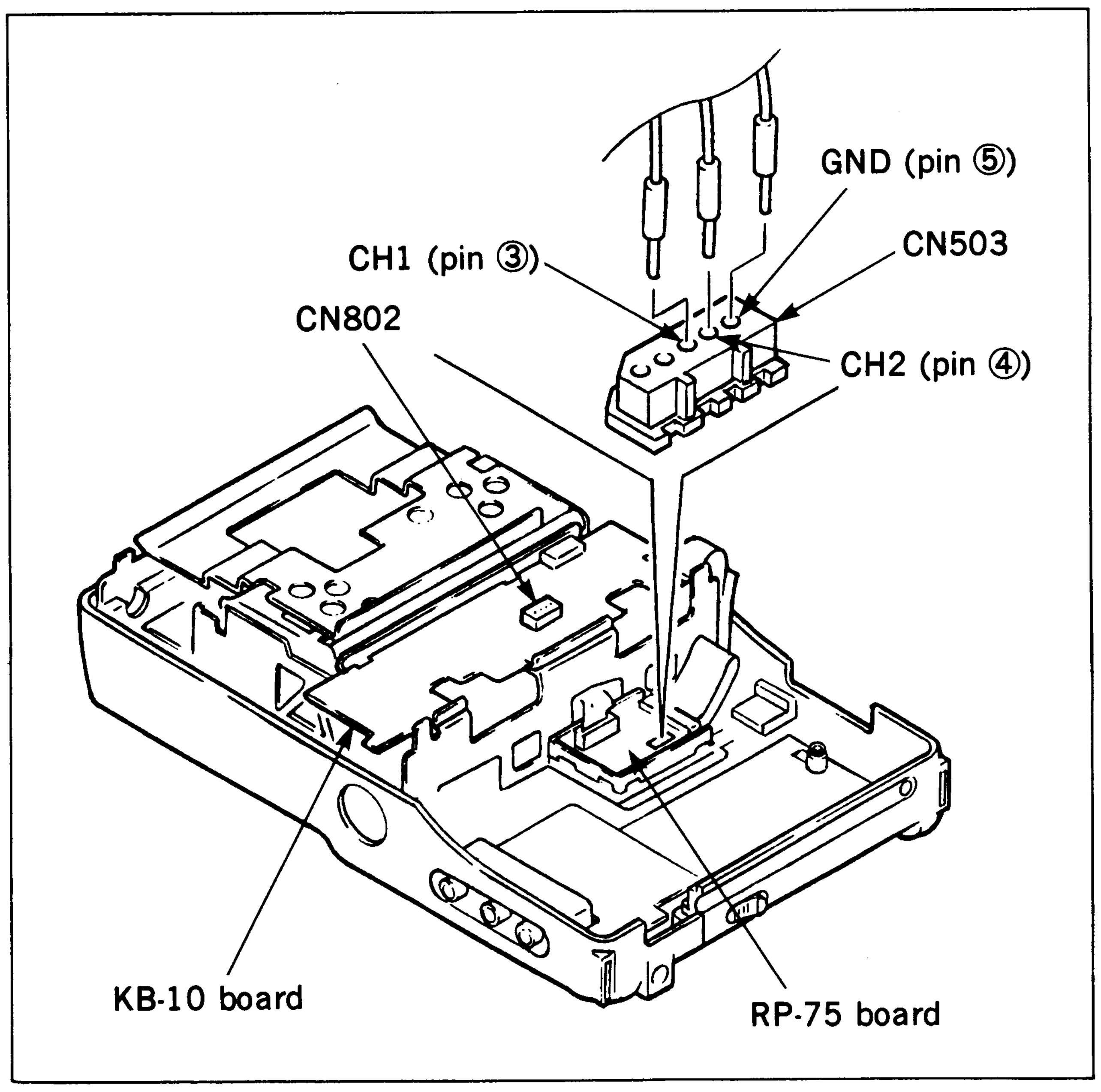


Fig. 7-1.

7-2. PREPARATION FOR ADJUSTMENT

1) Clean the tape running surfaces (tape guide, drum, capstan shaft, pinch roller.)
2) Connect to the oscilloscope.
   CH1 : RP-75 board CN503 pin ③ (PB RF)
   CH2 : RP-75 board CN503 pin ④ (SWP)
3) Play back the tracking alignment tape (WR5-1NP) (8-967-995-02).
4) Check that the RF waveform of the oscilloscope is flat at both inlet and outlet sides. When not flat, make adjustment as follows. (Refer to mechanical adjustment manual.)

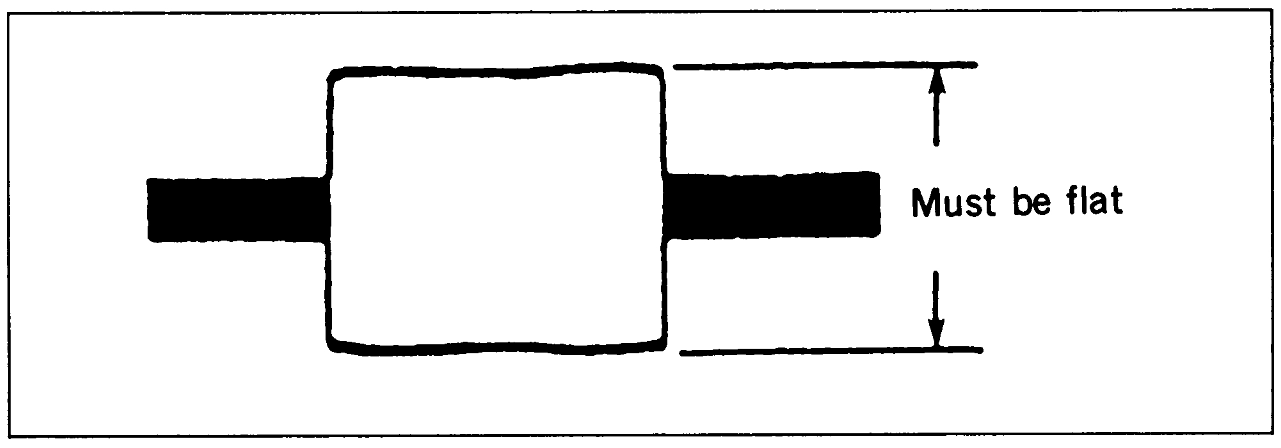


Fig. 7-2.

SECTION 8
ELECTRICAL ADJUSTMENTS

See the adjusting parts location diagram from on page 184 for the adjustment.

8-1. PREPARATION FOR ADJUSTMENT

The following measurement instruments are used for the electric adjustment.

8-1-1. Using Instruments

1) Monitor TV
2) Oscilloscope having two phenomena, band of 10MHz or more, and the delay mode.
3) Frequency counter
4) Pattern generator (having the video output terminal)
5) Digital voltmeter
6) Audio generator
7) Audio level meter
8) Audio distortion rate meter
9) Audio attenuator
10) Stabilized power source
11) Alignment tape
    - For tracking adjustment
      (WR5-1NP) Part code : 8-967-995-02
    - For checking of SP mode operation
      (WR5-5NSP) Part code : 8-967-995-42
      (WR5-4NSP) Part code : 8-967-995-41
    - For checking of LP mode operation
      (WR5-4NL) Part code : 8-967-995-51
    - For Hi 8 SP mode operation
      (WR5-8NSE) Part code : 8-967-995-43
    - For checking of AFM stereo operation
      (WR5-9NS) Part code : 8-967-995-23
    - For video frequency characteristic adjustment
      (WR5-7NE) Part code : 8-967-995-13
12) Extension harness
    Between AU-53 board CN101 and SV-38 board CN005
    J-6082-111-A
    Between AU-53 board CN102 and SV-38 board CN006
    J-6082-112-A
    Between RG-8 board CN001 and SV-38 board CN004
    J-6082-113-A
13) Multiplex transmission signal generator
14) COMMON voltage adjustment jig (J-6082-024-A)

8-1-2. Connection of Instruments

If there is no special direction, connect the measuring instruments as shown in the following figure and perform the adjustment.

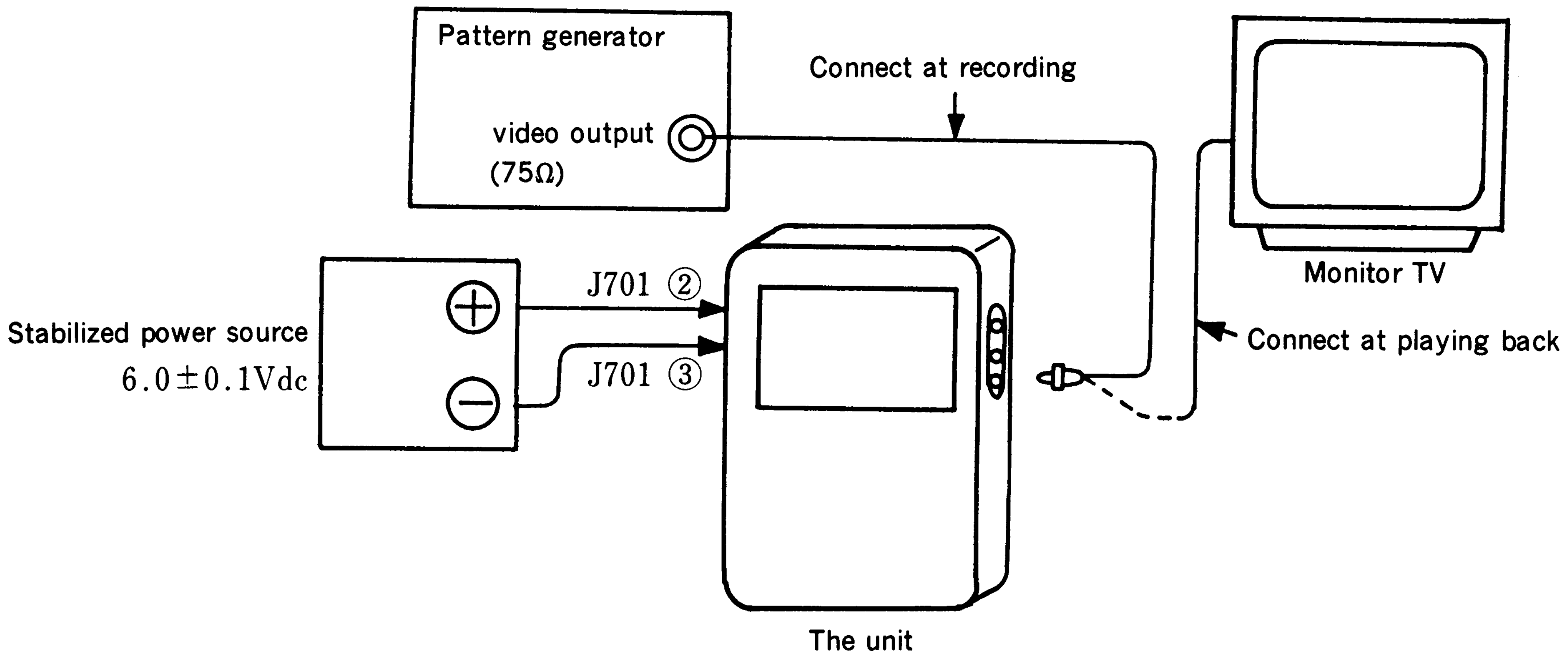


Fig. 8-1.

8-1-3. VIDEO/AUDIO Terminal of the Unit

The VIDEO/AUDIO (L/R) terminal of the unit has the function of both input and output. The operation as the input terminal or as the output terminal is automatically selected according to the operating condition of the unit.
When connecting with the other instruments, perform the connection according to the input-output of the terminal.

The operation condition of the unit and the automatic input-output election of the terminal.

Input mode selected with the INPUT SELECT button	The case that the unit is stopped or the recording mode is selected.	The case that the unit is set to the playback mode.
TUNER (television screen)	Output	Output
LINE*	Input	Output
CAMERA	Output	Output

* When the LINE is selected with the INPUT SELECT button, the display of INPUT or OUTPUT is shown according to the operation condition.

8-1-4. Set-up at the Adjustment

As the video signal obtained from the pattern generator is used as the adjustment signal for adjusting, it is required that the video output signal satisfies the specified value. Connect the pattern generator and the oscilloscope with the VIDEO input-output terminal. Check that the amplitude of the synchronous signal of the video signal is approximately 0.3V, the amplitude of the picture part is approximately 0.7V, the amplitude of the burst signal is approximately 0.3V and is flat, and the level proportion of the burst signal and the red signal is 0.30 : 0.66.

The video signal (color bar) used for the adjustment is shown in the Fig. 8-2.

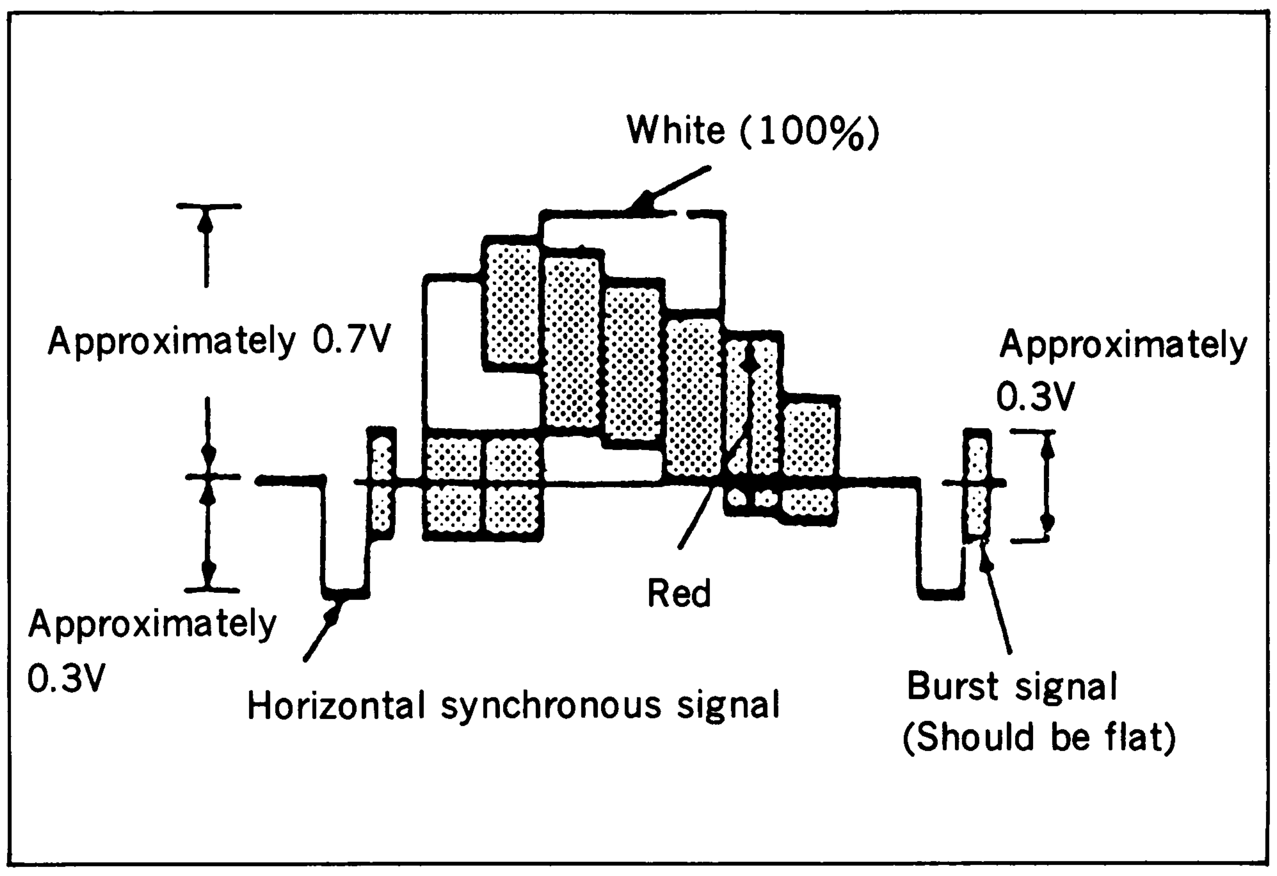


Fig. 8-2. Color bar signal of the pattern generator

8-1-5. Alignment Tape

The following tapes are prepared for the alignment tape.

Use the tape designated in the signal column of each adjustment.

Name	Recording mode	Type of tape	Speed of tape	Recording contents		Usage
				Video area	PCM area	
Tracking WR5-1NP	L	MP	SP	CH2 : 1MHz Signal for tape pass adjustment Marker for switching position adjustment(CH1 : 9MHz)		Tape pass adjustment Switching position adjustment
Video frequency characteristic WR5-7NE	E	ME	SP	RF sweep 0~15MHz Marker 2, 4.5, 7, 8.5, 10MHz		Frequency characteristic adjustment
Checking operation WR5-4NSP or WR5-5NSP	L	MP	SP	● Video signal Color bar 4 minutes Monoscope 4 minutes ● Audio signal (AFM) 400Hz 60% modulation	● Audio signal (PCM) monoscope part 20Hz, 20sec. 400Hz, 20sec. 14kHz, 20sec. } Repeat four times Color bar part 1kHz 4 minutes	Checking operation
WR5-8NSE	E	ME	SP		● Audio signal (PCM) 400Hz	
WR5-4NL	L	MP	LP	● Video signal Color bar 4 minutes monoscope 4 minutes ● Audio signal (AFM) 400Hz 60% modulation		
AFM stereo checking operation WR5-9NS	L	MP	SP	● Video signal Color bar 4 minutes monoscope 4 minutes ● Audio signal (AFM) • Color bar part Lch : 400Hz L+R (1.5MHz±60kHz) Rch : 1kHz L−R (1.7MHz±30kHz) • monoscope part DEV+Bilingual (including a RF ID signal)	● Audio signal (PCM) monoscope part 20Hz, 20sec. 400Hz, 20sec. 14kHz, 20sec. } Repeat four times Color bar part 1kHz 4 minutes	AFM stereo PB matrix adjustment

Note : Recording mode
L·········Normal mode
E·········hi8(Hi band) mode

Types of tape
MP·········Application type metal tape
ME·········Steam metal tape

Table. 8-1.

The 75% color bar signal recorded in the alignment tape is shown in the Fig.8-3.

Note : Measure with the VIDEO INPUT-OUTPUT terminal (75Ω terminal) playback mode.

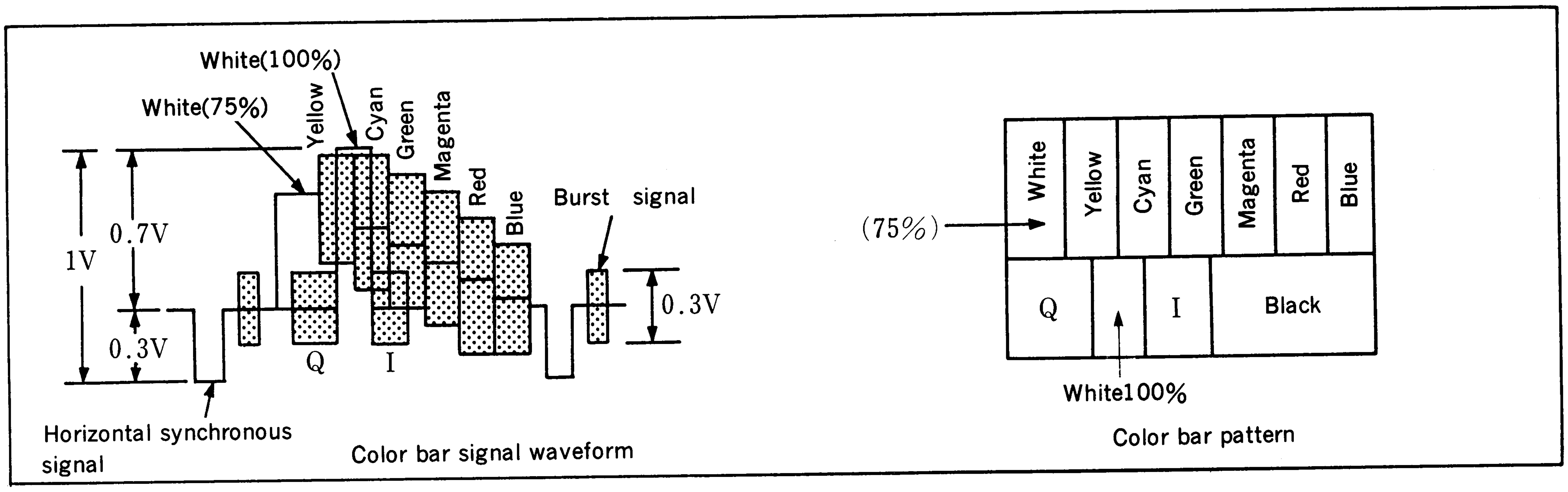

White(100%)
White(75%)
Yellow
Cyan
Green
Magenta
Red
Blue
Burst signal
1V
0.7V
0.3V
0.3V
Q
I
Horizontal synchronous signal
Color bar signal waveform
(75%)
White
Yellow
Cyan
Green
Magenta
Red
Blue
Q
I
Black
White100%
Color bar pattern

Fig.8-3. Color bar signal of the alignment tape

8-1-6. Input/Output Level and Impedance

VIDEO/AUDIO (L/R) Input-output terminal (pin jack)

VIDEO input	Input signal : 1Vp-p, 75Ω unbalance, Synchronous negative
VIDEO output	Output signal : 1Vp-p, 75Ω unbalance, Synchronous negative
AUDIO input	Input level : -7.5dBs(0dBs=0.775Vrms) Input impedance : 47kΩ or more
AUDIO output	Specified output : -7.5dBs Output impedance : 10kΩ or less

8-1-7. Test Mode

Use CN802 on the KB-10 board.
CN802 pin position

1	TEST B
2	GND
3	TEST A
4	TEST C
5	TEST D

When each terminal of the TEST A, B, C and D is shortened and opened, sixteen types of TEST MODE are selected.

When servicing, attaching the “test mode set jig” (J-6082-110-A) to CN802 allows to select sixteen types of test mode with the hexadecimal selecting switches of the jig.

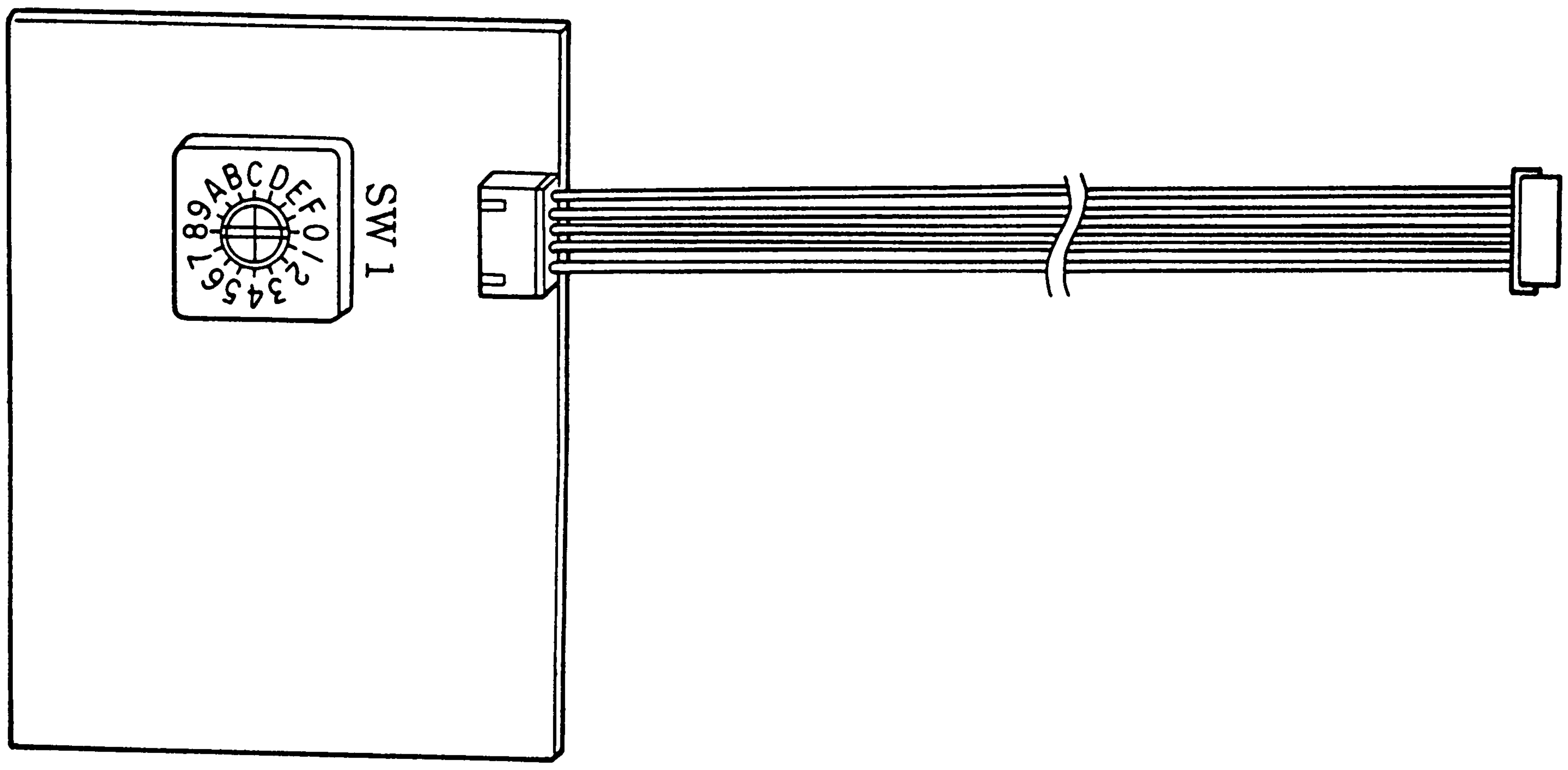


Fig8-4. Test mode set jig

TEST MODE table		Switch position of the test mode set jig.
DCBA	SELECT MODE	
0000	Normal mode	0
0001	Emergency off	1
0010	TT TEST	2
0011	Track shift	3
0100	SW POSI L	4
0101	SW POSI H	5
0110	BATT DOWN PRE	6
0111	BATT DOWN END	7
1000	VIDEO DATA, MP, SP	8
1001	VIDEO DATA, MP, LP	9
1010	VIDEO DATA, ME, SP	A
1011	VIDEO DATA, ME, LP	B
1100	VIDEO DATA, HI, MPHG, SP	C
1101	VIDEO DATA, HI, MPHG, LP	D
1110	VIDEO DATA, HI, ME, SP	E
1111	VIDEO DATA, HI, ME, LP	F

The test code is designated by four figures.

MSB LSB
“D”, TEST “C”, TEST “B”, TEST “A”

At short : 1, At open : 0

VIDEO DATA SELECT MODE is set at the TEST, “D” MAKE.

① Normal mode

Normal set condition

② Emergency off (Release of emergency stop)

③ TT TEST

MODE for extending the SIRCS code (For producing line)

④ Track shift

Run on the ATF track shift condition at the playback mode.

Timer microcomputer is in the clock adjustment mode.

⑤ SW POSI

Adjustment mode of switch position.

SWPOSI is stored in EEPROM as 16bit DATA. This data is adjusted dividing high 8bit and low 8bit. Use CH+/− KEY.

TEST MODE0101 : Varies at 16μsec per 1STEP.

TEST MODE0100 : Varies at 1μsec per 1STEP. When low 8 bit is incremented from FF. HEX, high 8 bit goes UP. And when it is decremented from 00.HEX, high 8 bit goes DOWN.

Preset function of the SW POSI is added. The preset function sets to high 8 bit to 07. HEX, when the DATA SCREEN KEY of SC part is pressed in the SW POSI adjustment mode. The low 8 bit is not varied.

⑥ BATTTERY DOWN ADJUSTMENT

Adjusted with TEST MODE 0111. When this mode is set, the following display is shown on LCD.

PRE	−1.76
DOWN	−1.74

Supplying voltage for adjusting is performed with applying 5.50V+0.02V to the battery terminal in the TUNER REC SP MODE. When pressing the INDEX KEY on the KB-10 board, the color of display on the LCD turns to blue for few seconds from white, and then returns to white. The voltage of the battery PRE, DOWN is stored in EEPROM as the 8bit DATA by this operation.

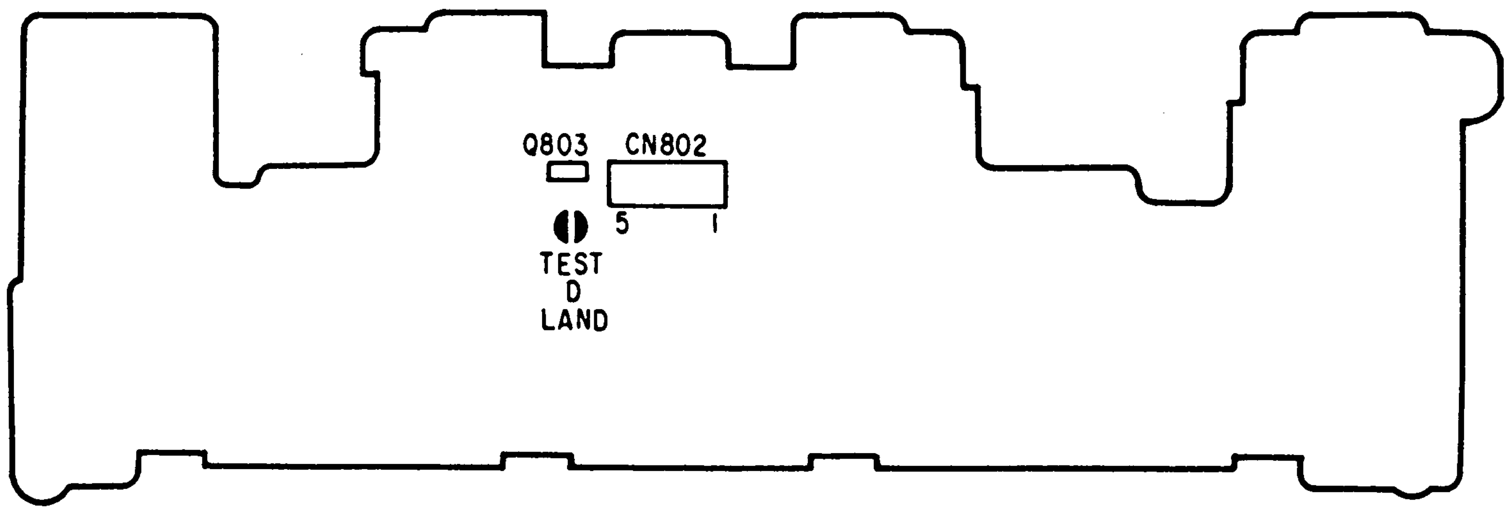
⑦ VIDEO DATA ADJUSTMENT MODE

Short the TEST D (Solder the split land at the lower part of the KB-10 board Q803)
The following display is shown on the LCD.

VIDEO DATA

CFL1	1	(RESET)
CFL2	1	(DISPLAY)
NCL1	1	(SLEEP)
NCL2	1	(NEXT)
NCLP1	1	(UP)
NCLP2	1	(CLOCK)

KB-10 BOARD (COMPONENT SIDE)



Six types of DATA are varied with the KEY on the SC part.

RESET ——→ COUNTER RESET KEY
DISPLAY ——→ DATA SCREEN KEY
SLEEP ——→ SLEEP KEY
NEXT ——→ NEXT KEY
UP ——→ + KEY
CLOCK ——→ CLOCK SET KEY

Pressing each KEY allows to rewrite DATA. ("0" is rewritten to "L", "1" is rewritten to "H".)
Eight modes are adjusted by the types of TAPE (ME, MP), recording (HI BAND, LO BAND) MODE, and TAPE SPEED (SP, LP).when the CH+KEY is pressed, the color of the display on the LCD turns to blue for few seconds from white and returns to white. The function to store the screen DATA in EEPROM is added by this operation. (See to the Table 8-2. for the data writing to EEPROM.)

Table 8-2. EE P ROM Write Data

TEST MODE						CFL1	CFL2	NCL1	NCL2	NCLP1	NCLP2
D	C	B	A	Switch position of the test mode set jig							
1	0	0	0	8	SP•MP	H	L	H	L	H	L
1	0	0	1	9	LP•MP	L	H	L	H	L	H
1	0	1	0	A	SP•ME	H	L	H	L	H	L
1	0	1	1	B	LP•ME	L	H	L	H	L	H
1	1	0	0	C	Hi-8 SP•MP	H	L	L	H	H	L
1	1	0	1	D	Hi-8 LP•MP	L	H	L	H	L	H
1	1	1	0	E	Hi-8 SP•ME	H	L	H	L	H	L
1	1	1	1	F	Hi-8 LP•ME	L	H	L	H	L	H

Note) When EEPROM is replaced, the following adjustment or write should be performed.

1. SW POSI adjustment
2. BATTERY DOWN adjustment
3. VIDEO DATA write
4. Channel preset

8-2. POWER SOURCE PART ADJUSTMENT

8-2-1. UNREG Power Source Voltage Check (SV-38 board)

Mode	Stop (POWER ON)
Measuring instrument	Digital voltmeter
BL UNREG check	
Measurement point	CN007 Pin ⑫
Specified value	5.9±0.2Vdc
DD UNREG check	
Meaurement point	CN007 Pin ⑪
Specified value	5.9±0.2Vdc
SS UNREG check	
Measurement point	CN007 Pin ⑥
Specified value	5.9±0.2Vdc
LD UNREG check	
Measurement point	CN07 Pin ③
Specified value	5.9±0.2Vdc
CAP UNREG check	
Measurement point	CN007 Pin ①
Specified value	5.9±0.2Vdc

[Checking method]

1) Check that the voltage of the stabilized power source is 6.0±0.1Vdc.
2) Each specified value should be satisfied.

8-2-2. Switch 5V Adjustment (SV-38 board)

Mode	Tuner receiver, record (SP mode)
Signal	Optional TV broadcast
Measurement point	CN009 Pin ⑭
Measuring instrument	Digital voltmeter
Adjustment element	RV401
Specified value	4.95±0.05Vdc

[Adjustment Method]

1) Adjust with RV401 to 4.95±0.05Vdc.

8-2-3. DD Converter Frequency Adjustment (SV-38 board)

Mode	Stop (POWER ON)
Measurement point	IC401 Pin ①
Measuring instrument	Frequency counter
Adjustment element	RV402
Specified value	479±5kHz

[Adjustment Method]

1) Adjust the oscillation frequency to 4.95±0.05Vdc with RV402.

8-2-4. −8V Adjustment (TU-123 board)

Mode	Stop (POWER ON)
Measurement point	CN001 Pin ㉒
Measuring instrument	Digital voltmeter
Adjustment element	RV501
Specified value	−8.0±0.1Vdc

[Adjustment Method]

1) Adjust with RV501 to −8.0±0.1Vdc.

8-2-5. LCD Power Source Voltage Check (RG-8 board)

Mode	Stop
Measuring instrument	Digital voltmeter
+13V check	
Measurement point	CN001 Pin ㉒
Specifed value	13.0±0.7Vdc
−20V check	
Measurement point	CN001 Pin ⑳
Specified value	−20.0±1.5Vdc

[Checking Method]

1) Each specified value should be satisfied.

8-2-6. CAM UNREG Check (CN-6 board)

Mode	Camera standby
Measurement point	CN601 Pin ①
Measuring instrument	Digital voltmeter
Specified value	5.75±0.10Vdc

[Connection]

1) Connect the CAMERA connector with the camera.
   If there is no camera, connect the resistance of 12Ω 5W between CN601 Pin ① and Pin ⑤.

[Checking Method]

1) Turn on the power, and input CAMERA with the INPUT SELECT button.
2) Check that the voltage of the stabilized power source is 6.0±0.1Vdc.
3) Check that the voltage of the CN601 Pin ① is 5.75±0.10Vdc.

8-3. SYSTEM CONTROL SYSTEM ADJUSTMENT

8-3-1. Clock Precision Adjustment (SV-38 board)

Mode	Stop (POWER ON)
Test mode *	0011 (Jig switch position 3)
Measurement point	CN003 Pin ㉔
Measuring instrument	Frequency counter
Adjustment element	CV101
Specified value	16384.0±0.2Hz

* Refer to 「8-1-7. Test mode」.

[Adjustment Method]

1) Set the test mode * 0011 (jig switch position 3).
2) Adjust with CV101 to 16384.0±0.2Hz.

8-3-2. Battery Down Adjustment

Refer to 「8-1-7. Test Mode ⑥ Battery Down Adjustment」.

8-4. SERVO SYSTEM ADJUSTMENT

8-4-1. CUE/REV Adjustment (SV-38 board)

Mode	CUE and REV
Signal	Alignment tape : for checking the SP mode operation (WR5-5NSP) : for checking the LP mode operation (WR5-4NL)
Measurement point	IC301 Pin ⑩ and Pin ⑪ and Q306 Ⓒ
Measuring instrument	Oscilloscope
Adjustment element	RV301
Specified value	WR5-5NSP at CUE/REV Q306 Ⓒ DC voltage level is ”H” WR5-4NL at CUE/REV Q306 Ⓒ DC voltage level is ”L”

[Adjustment Method]

1) Adjust the IC302 Pin ⑩ to 3.0±0.1Vdc with RV301.
2) Play back the WR5-5NSP and set the CUE and REV mode, check that the DC voltage level of Q306 Ⓒ is ”H” (4Vdc or more). And play back the WR5-4NL and set the CUE and REV mode, check that the DC voltage level of Q306 Ⓒ is ”L” (1Vdc or less).
3) When the item 2) is not satisfied, play back the WR5-5NSP and set the CUE and REV mode, measure the DC voltage of IC302 Pin ⑪. Set this value as Vsp. Play back the WR5-4NL and set the CUE and REV mode, measure the DC voltage of IC301 Pin ⑪. Set this value as VLP.

   $$V=\frac{V_{SP}+V_{LP}}{2}$$

   Obtain the value of V, and adjust with RV301 so that the DC voltage of IC302 Pin ⑩ is the value of V.
4) Return to the item 2) and reconfirm.

8-4-2. Switching Position Adjustment (RP-75 board)

Mode	Playback
Test mode ∗	0101 (Jig switching position 5) and 0100 (Jig switching position 4)
Signal	Alignment tape: for tracking adjustment (WR5-1NP)
Measurement point	CH1 : CN503 Pin ④ (RF SW P) CH2 : CN503 Pin ③ (RF OUT)
Measuring instrument	Oscilloscope
Adjustment KEY	KB-10 board S802 (CH-) and S803 (CH+)
Specified value	$t=0\pm 5\mu$sec

[Adjustment Method]

1) Set the test mode ∗ 0101 (Jig switching position 5).
2) Press the DATA SCREEN button on the upper part of the LCD.
3) Press the S802(CH−) and S803(CH+) switches on the KB-10 board so that ”t” is nearly 0. (rough adjustment)
4) Set the test mode ∗ 0100 (Jig switching position 4).
5) Press S802(CH−) and S803 (CH+) switches on the KB-10 board so that $t=0\pm 5\mu$sec. (fine adjustment)
6) Disconnect the test mode jig.

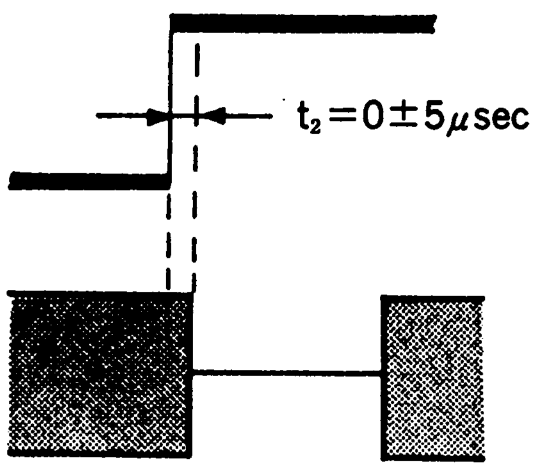


Fig. 8-6.

8-5. VIDEO SYSTEM ADJUSTMENT

Adjust the video system in the following procedures in principle. The color bar signal supplied from the pattern generator is used as the video input signal for the video system adjustment of the recording mode. Check that the synchronous signal and the color burst signal are satisfied with the specified value designated to the adjusting setup as shown in the figure 8-2.

[Adjustment Procedures]

1) Playback frequency characteristic adjustment
2) fsc check
3) SYNC AGC adjustment
4) IR adjustment
5) Y/C separation adjustment
6) Emphasis Y level adjustment
7) De-emphasis Y level adjustment
8) Playback Y level adjustment
9) Y FM carrier adjustment
10) Y FM deviation adjustment
11) Recording Y level adjustment
12) Chroma emphasis adjustment
13) Recording chroma level adjustment

8-5-1. Playback Frequency Characteristic Adjustment (RP-75 board)

Mode	Playback
Signal	Alignment tape : for frequency characteristic adjustment(WR5-7NE)
Measurement point	CH1 : CN503 Pin ④(RF SWP) CH2 : CN503 Pin ③(PB RF)
Measuring instrument	Oscilloscope
Adjustment element	PB1-CH : RV501 PB2-CH : RV502
Specified value	2.0MHz level : 8.5MHz level=50 : 23±2

[Adjustment Method]

1) Adjust with each RV so that the PB1-CH, PB2-CH and PB RF OUT satisfy the specified value.

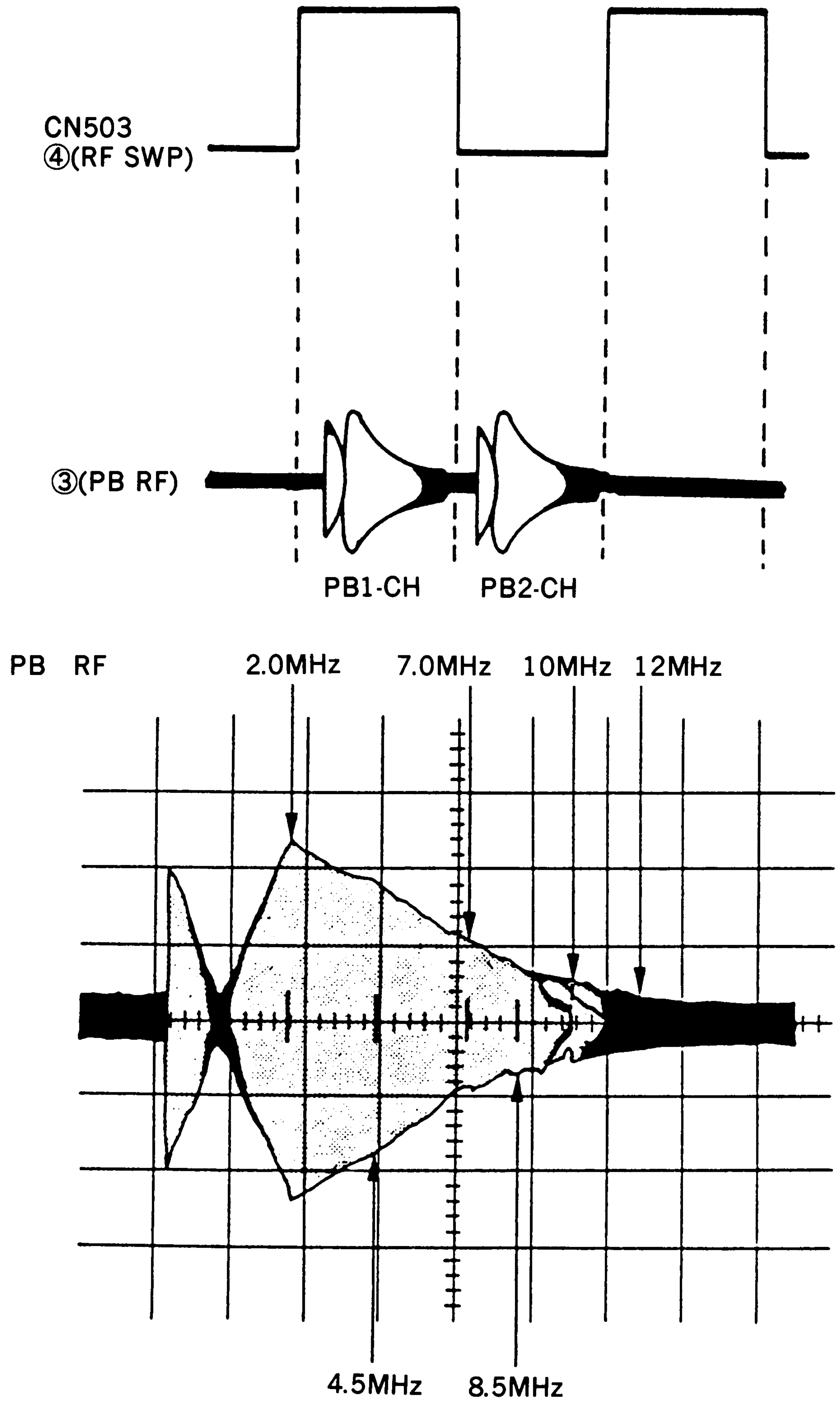


Fig. 8-7

8-5-2. fsc Check (SV-38 board)

Mode	Playback
Signal	Alignment tape : for operation check(WR5-5NSP) Color bar part
Measurement point	IC701 Pin ⑫
Measuring instrument	Oscilloscope Frequency counter
Specified value	Oscillation frequency : 3579545±150Hz Output level : 450±50mVp-p

[Checking Method]

1) Check that the oscillation frequency of the IC701 Pin ⑫ is 3579545±150Hz and the output level is 450±50mVp-p.

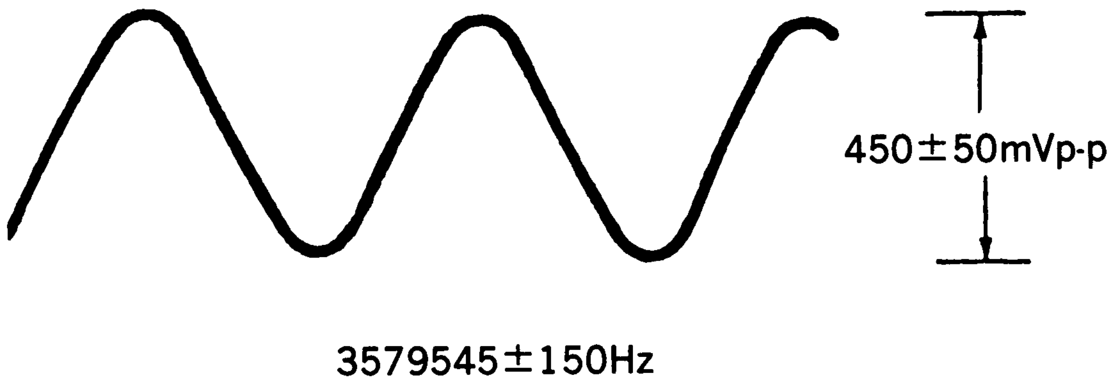


Fig.8-8.

8-5-3. SYNC AGC Adjustment (SV-38 board)

Mode	Recording
Signal	Color bar
Measurement point	IC601 Pin ㉜
Measuring instrument	Oscilloscope
Adjustment element	RV608
Specified value	0.50±0.02Vp-p

[Adjustment Method]

1) Adjust with RV608 to 0.50±0.02Vp-p.

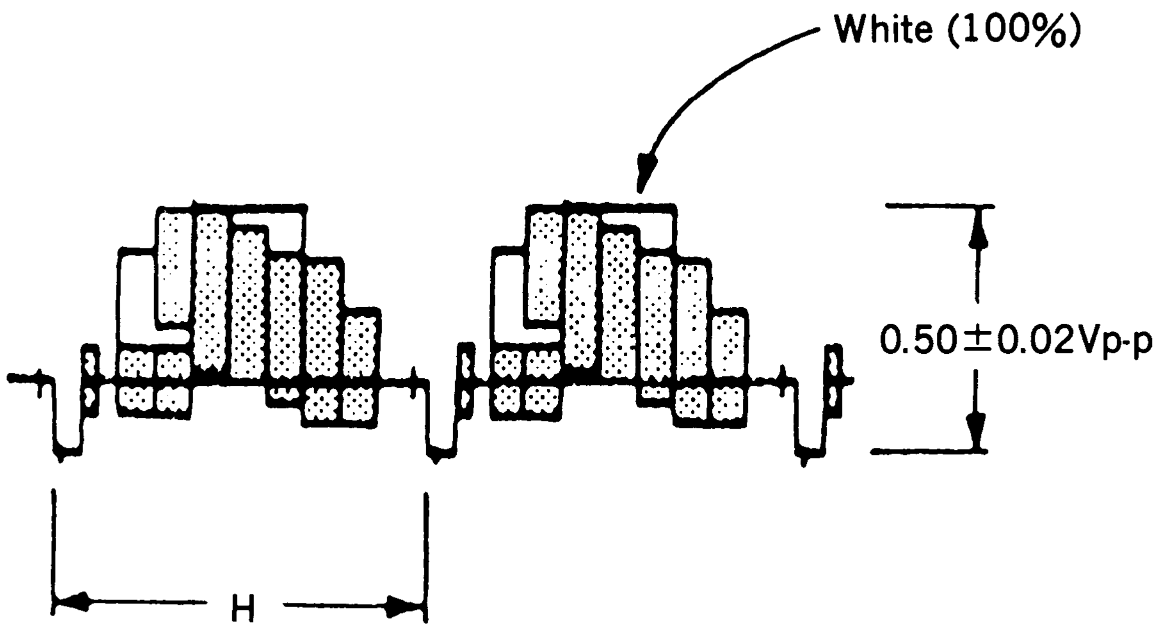


Fig. 8-9.

8-5-4. IR Adjustment (SV-38 board)

Mode	Recording
Signal	Color bar
Measurement point	IC601 Pin ⑦
Measuring instrument	Oscilloscope
Adjustment element	RV604
Specified value	Minimize the red remaining chroma element (60mVp-p or less)

[Preparation]

1) Short with the jumper wire between the Pin ⑭ and Pin (51) of IC601.

[Adjustment Method]

1) Minimize the red remaining chroma element with RV604. (60mVp-p)
2) After the adjustment, disconnect the jumper wire.

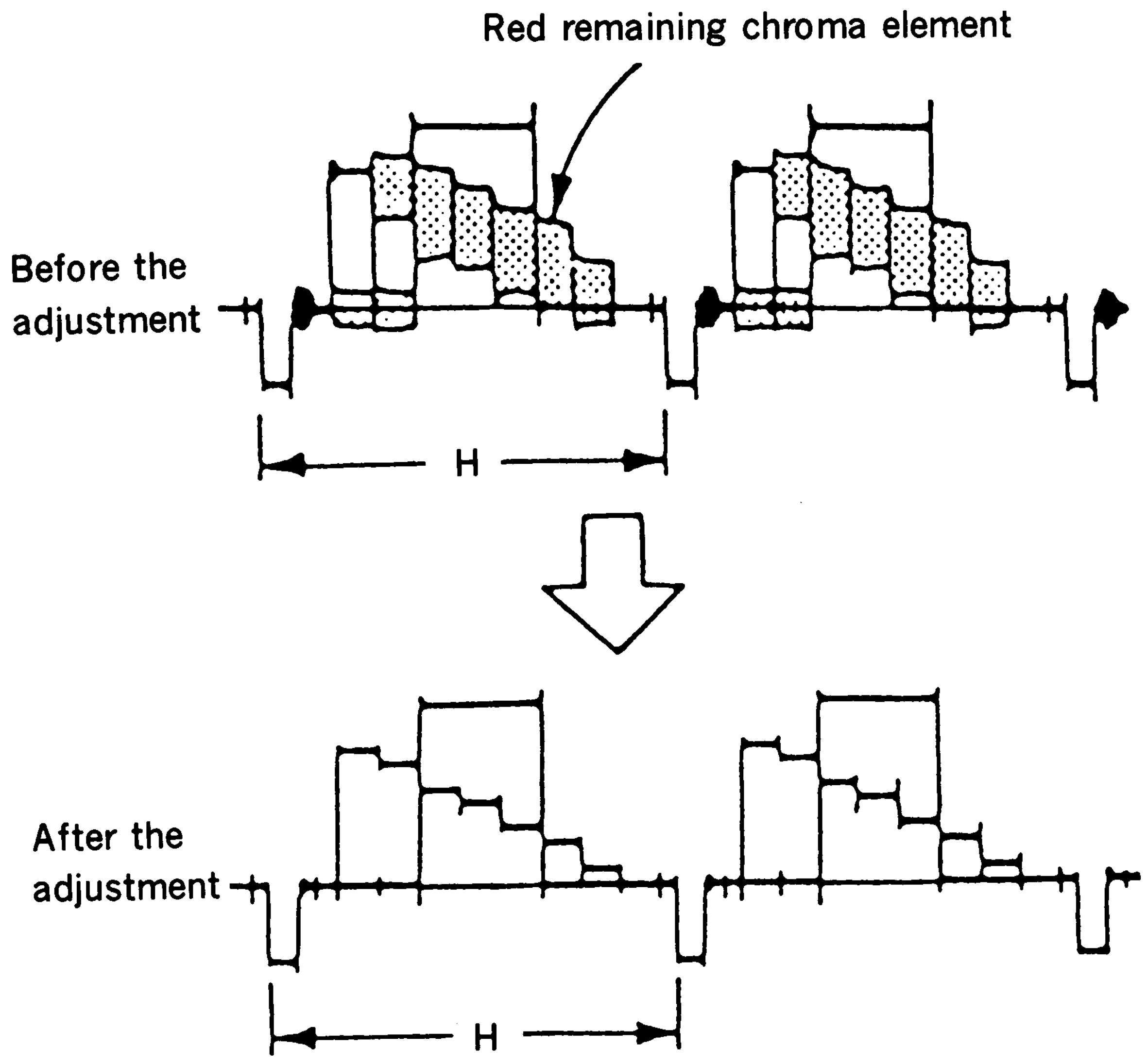

Red remaining chroma element
Before the adjustment
H
After the adjustment
H

Fig.8-10.

8-5-5. Y/C Separation Adjustment (SV-38 board)

Mode	Recording
Signal	Color bar
Measurement point	IC601 Pin ⑪
Measuring instrument	Oscilloscope
Adjustment element	RV601, RV606 (alternate adjustment)
Specified value	Minimize the red remaining chroma element (30mVp-p or less)

[Adjustment Method]

1) Adjust RV601 and RV606 alternately, and minimize the red remaining chroma element.

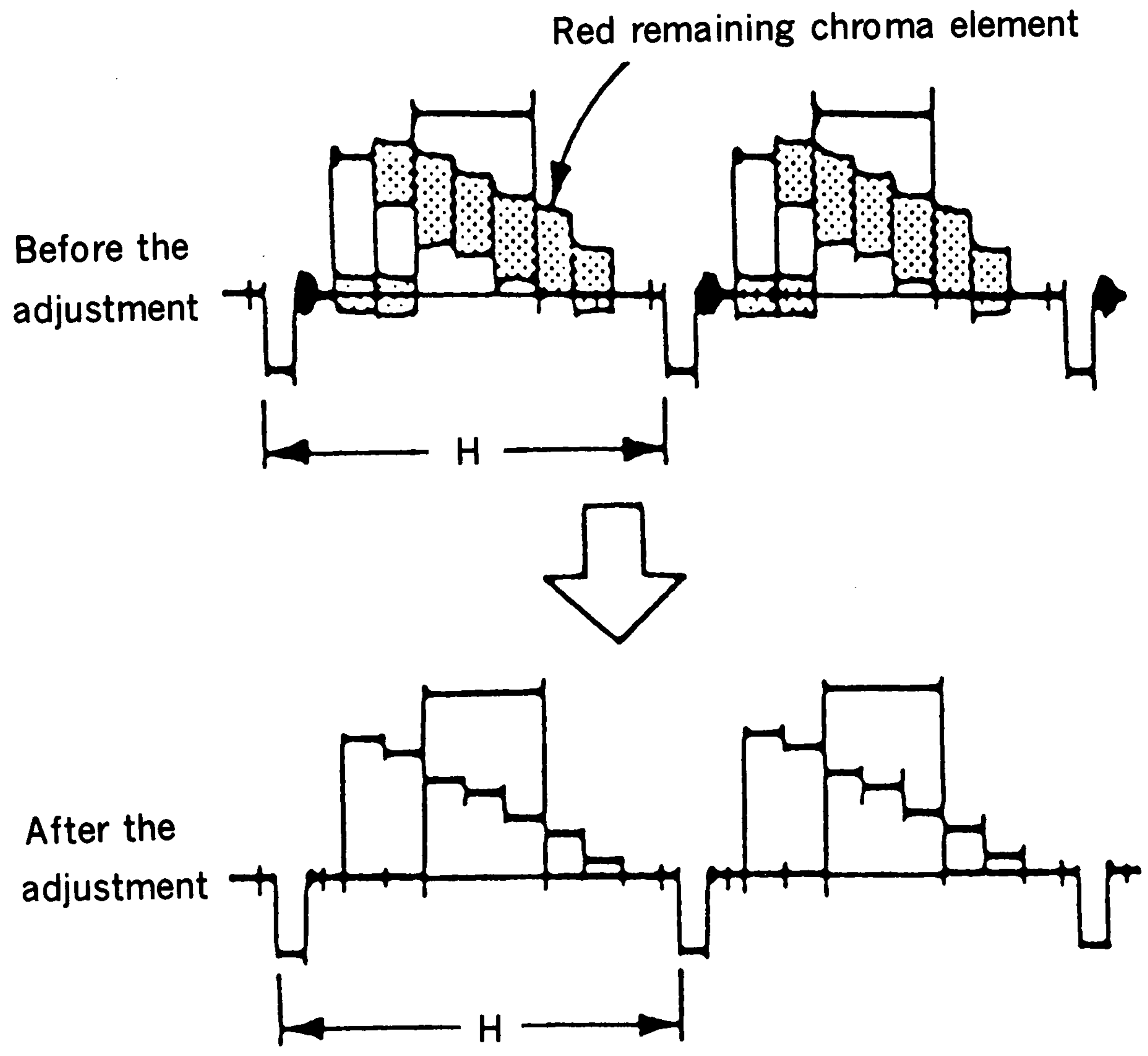

Red remaining chroma element
Before the adjustment
H
After the adjustment
H

Fig.8-11.

8-5-6. Emphasis Y Level Adjustment (SV-38 board)

Mode	Recording
Signal	Color bar
Measurement point	IC601 Pin ③
Measuring instruement	Oscilloscope
Adjustment element	RV607
Specified value	0.50±0.02Vp-p

[Adjustment Method]

1) Adjust with RV607 to 0.50±0.02Vp-p.

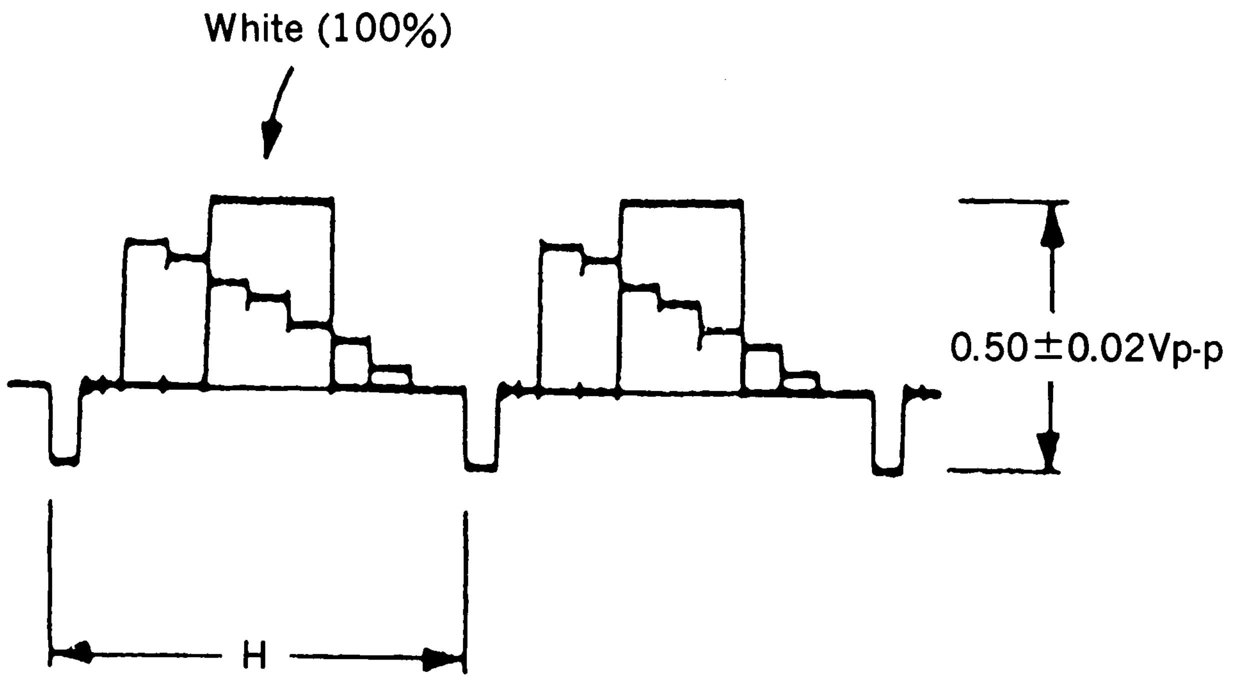


Fig.8-12.

8-5-7. De-emphasis Y Level Adjustment (SV-38 board)

Mode	Playback
Signal	Alignment tape: for operation check (WR5-5NSP)
Measurement point	IC601 Pin ㉑
Measuring instrument	Oscilloscope
Adjustment element	RV605
Specified value	0.50±0.02Vp-p

[Adjustment Method]

1) Adjust with RV605 to 0.50±0.02Vp-p.

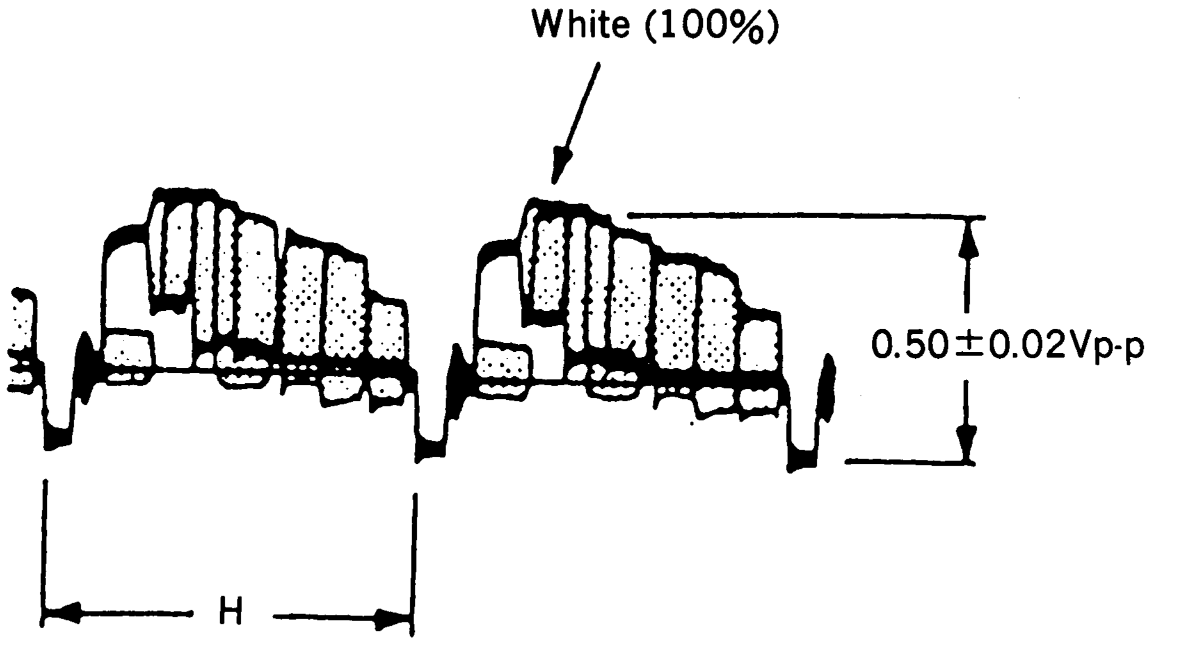


Fig.8-13.

8-5-8. Playback Y Level Adjustment (SV-38 board)

Mode	Playback
Signal	Alignment tape: for operation check (WR5-5NSP) and (WR5-8NSE) color bar part
Measurement point	CN004 Pin ④
Measuring instrument	Oscilloscope
Adjustment element	RV609
Specified value	1.00±0.05Vp-p

[Adjustment Method]

1) Play back WR5-5NSP and adjust with RV609 to 1.00±0.05Vp-p.

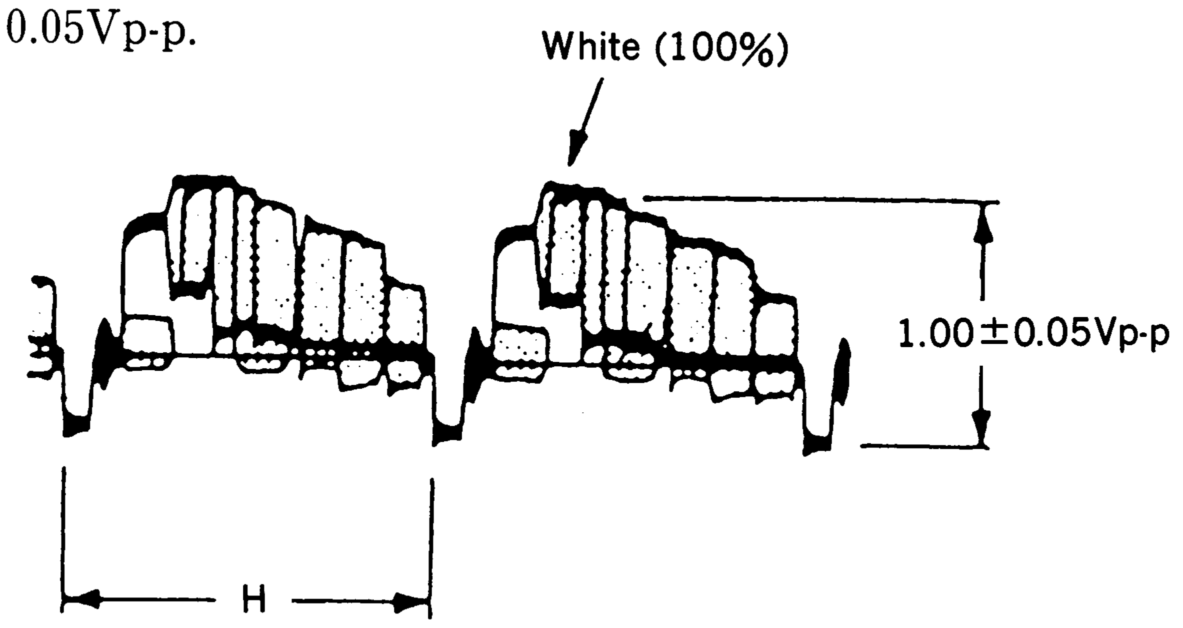


Fig.8-14.

2) Play back WR5-8NSE and check that it is 1.00±0.1Vp-p.

8-5-9. Y FM Carrier Adjustment (SV-38 board)

Mode	Recording
Signal	No signal
Measurement point	CN801 Pin ⑩
Measuring instrument	Frequency counter
Adjustment element	RV602
Specified value	4.37±0.02MHz

[Adjustment Method]

1) Adjust with RV602 to 4.37±0.02MHz.
2) After the adjustment, be sure to perform 「Y FM deviation adjustment」.

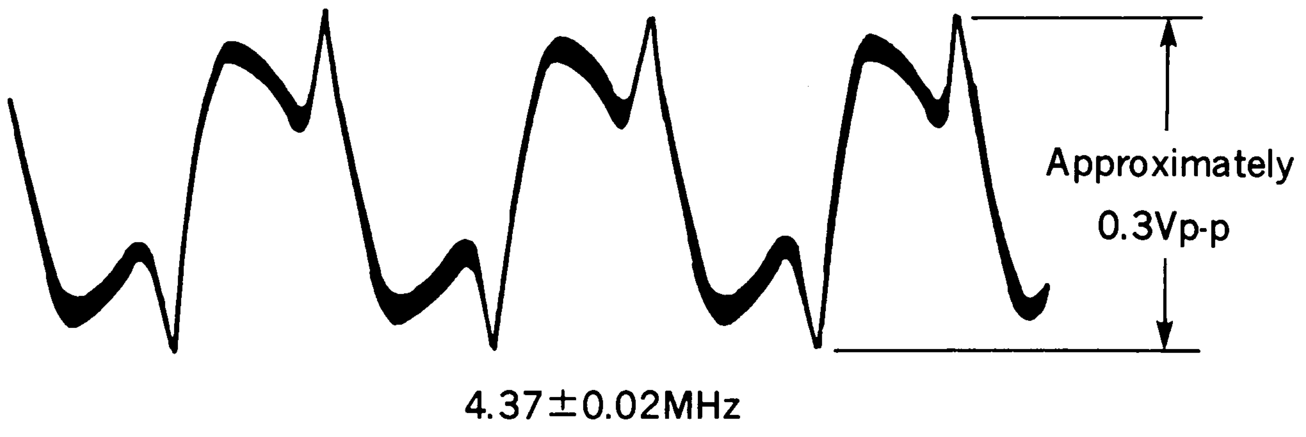


Fig.8-15.

8-5-10. Y FM Deviation Adjustment (SV-38 board)

Mode	Recording and playback
Signal	Color bar
Measurement point	VIDEO input-output terminal (75Ω terminal)
Measuring instrument	Oscilloscope
Adjustment element	RV603
Specified value	Playback level is 1.00±0.05Vp-p

Note) 「De-emphasis Y level adjustment」, 「Playback Y level adjustment」 and 「Y FM carrier adjustment」 should be completed.

[Adjustment Method]

1) Record the color bar signal.
2) Play back the recorded signal.
3) Check the playback output.
   Specified value : 1.00±0.05Vp-p
4) When the specified value is not satisfied, rotate RV603 as shown in the following table and return to the item 1), and then perform the reconfirmation.

	Rotating direction of RV603
Over the specified value	Clockwise (↻)
Under the specified value	Counterclockwise (↺)

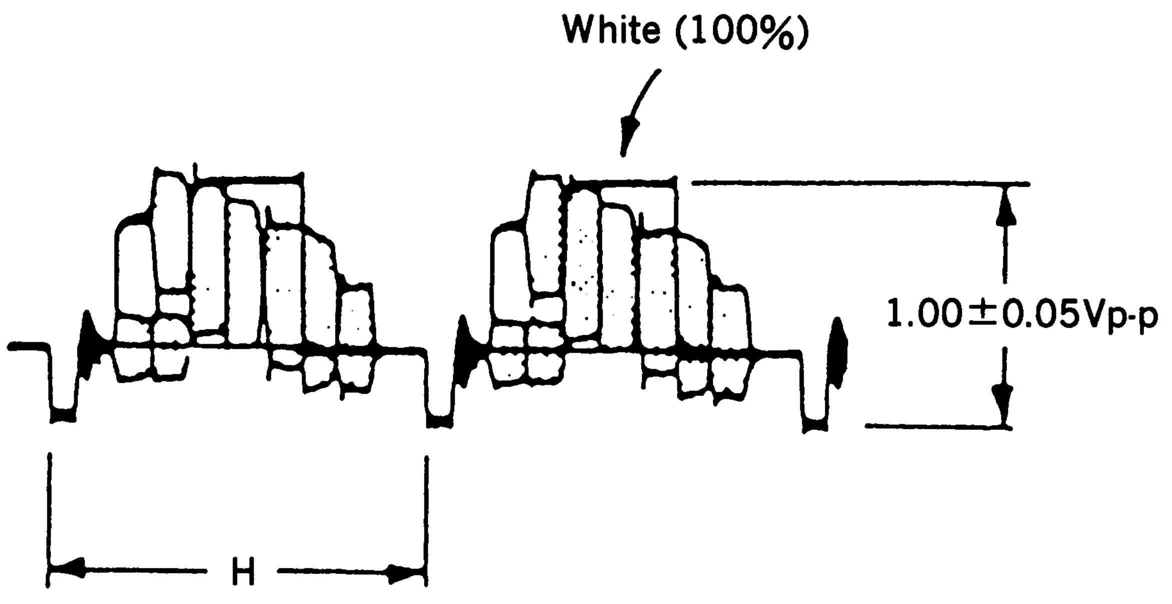


Fig.8-16

8-5-11. Recording Y Level Adjustment (SV-38 board)

Mode	Recording
Signal	No signal
Measurement point	CN801 Pin ⑩
Measuring instrument	Oscilloscope (20MHz band limit ON)
Adjustment element	RV802
Specified value	260±5mV

[Adjustment Method]

1) Adjust with RV802 to 260±5mV.

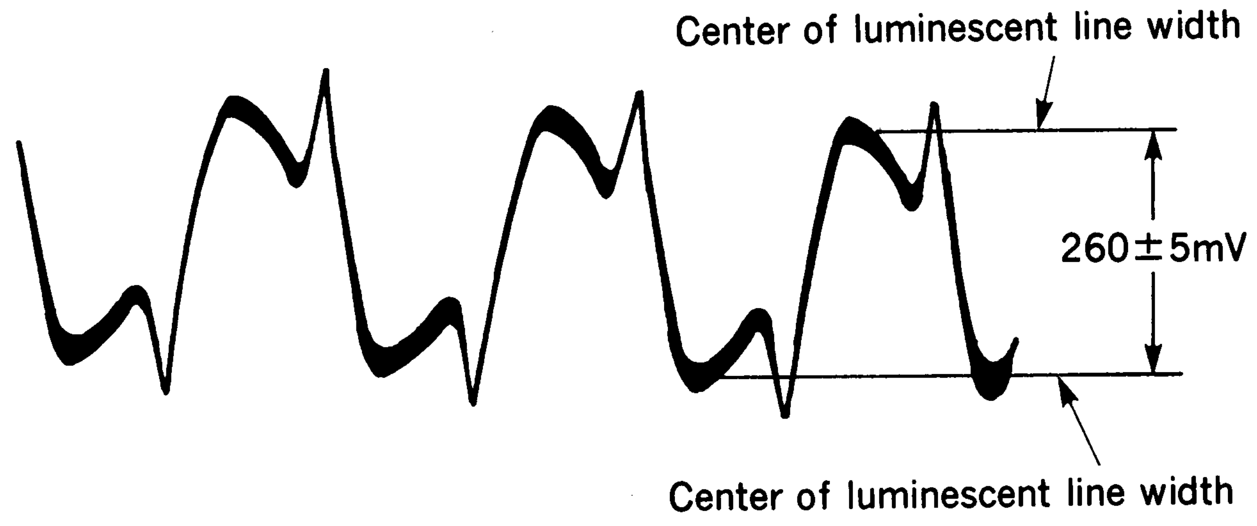

Center of luminescent line width
260±5mV
Center of luminescent line width

Fig.8-17.

8-5-12. Chroma Emphasis Adjustment (SV-38 board)

Mode	Recording
Signal	Color bar
Measurement point	IC701 Pin ㉔
Measuring instrument	Oscilloscope
Adjustment element	FL702
Specified value	Minimize the red level

[Preparation]

1) Connect the resistance of 3.3kΩ between the IC701 Pin ㉔ and GND.

[Adjustment Method]

1) Minimize the red level with FL702.
2) After the adjustment, disconnect the resistance connected in the preparation.

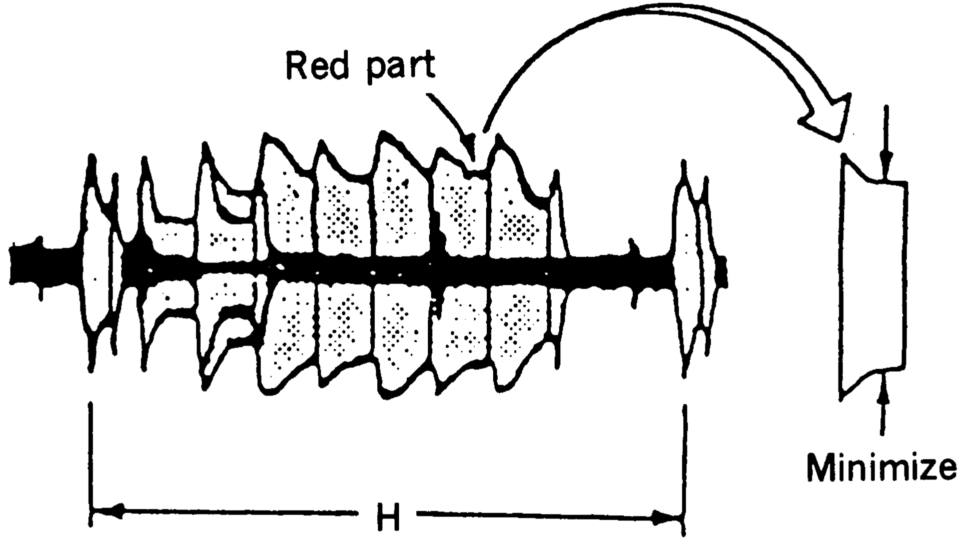


Fig.8-18.

8-5-13. Recording Chroma Level Adjustment (SV-38 board)

Mode	Recording
Signal	Color bar
Measurement point	CN801 Pin ⑪
Measuring instrument	Oscilloscope
Adjustment element	RV701
Specified value	Red level : 140±10mVp-p

[Adjustment Method]

1) Adjust the red level to 140±10mVp-p with RV701.

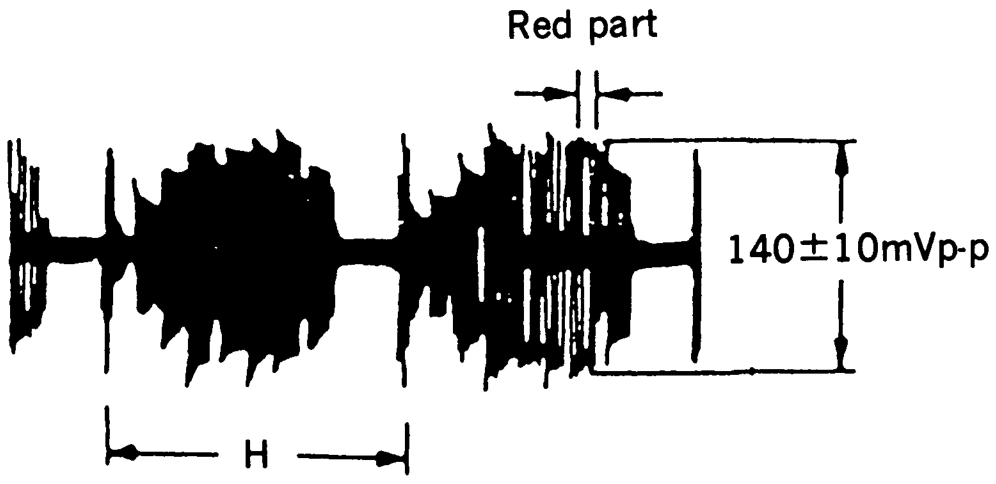


Fig.8-19.

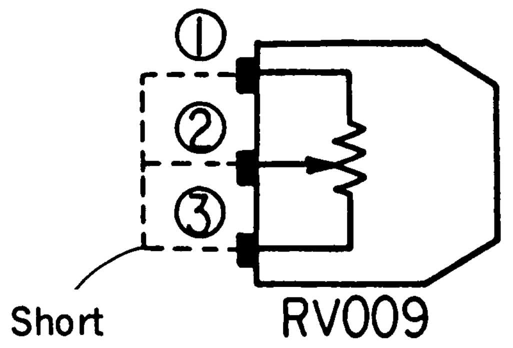
8-6. LCD SYSTEM ADJUSTMENT

Caution : If you touch the back light holder, you may receive an electric shock. Be careful to perform the adjustment.

[Preparation]

1) The adjustment except for 「white balance adjustment」 and 「V COM DC adjustment」, the back light unit is not required. Remove it and perform the adjustment.

3) Set the VR as follows if there is no special direction.
   - BRIGHT (RV009)
     ………Set the mechanical center position and short among pin ①,② and ③.



   - COLOR (RV001)
     ………The position where the voltage of IC001 46 of the RG-8 board is 1.5±0.1Vdc.
   - HUE (RV002)
     ………The position where the voltage of IC001 ③ of the RG-8 board is 1.79±0.05Vdc.

[Video input signal for adjustment]

Input the color bar signal, which the chroma signal and the burst signal are turned off, to the video input terminal as a video input signal for adjustment. Check with the CN001 pin ㉔ of the RG-8 board.

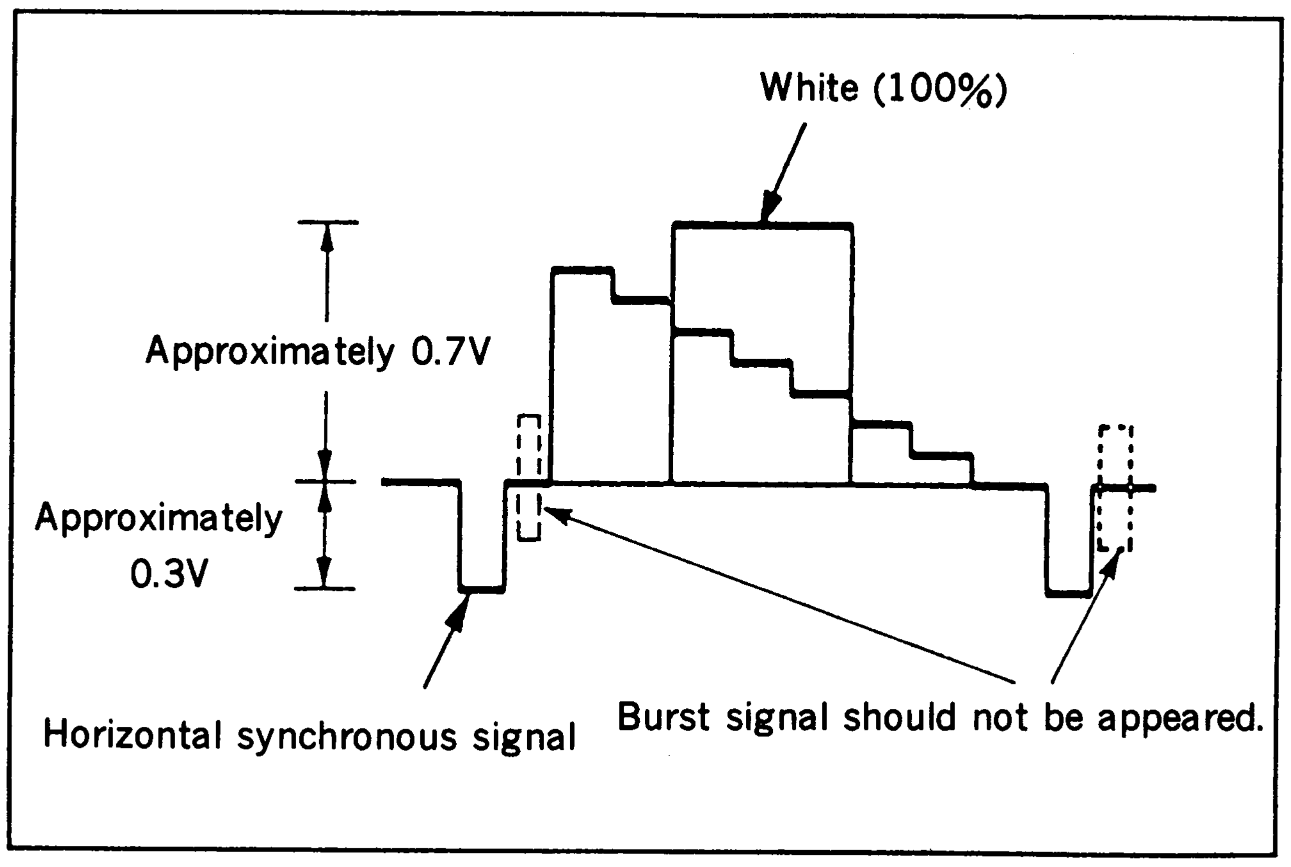

White (100%)
Approximately 0.7V
Approximately 0.3V
Horizontal synchronous signal
Burst signal should not be appeared.

Fig.8-20. Color bar signal which the chroma signal and the burst signal are turned off

8-6-1. Contrast Adjustment (RG-8 board)

Mode	POWER ON
Signal	Color bar which the chroma signal and the burst signal are turned off.
Measurement point	CN002 Pin ⑦
Measuring instrument	Oscilloscope
Adjustment element	RV005
Specified value	3.5±0.1V

[Adjustment Method]

1) Adjust with RV005 so that the voltage between white (100%) and the pedestal is 3.5±0.1V.

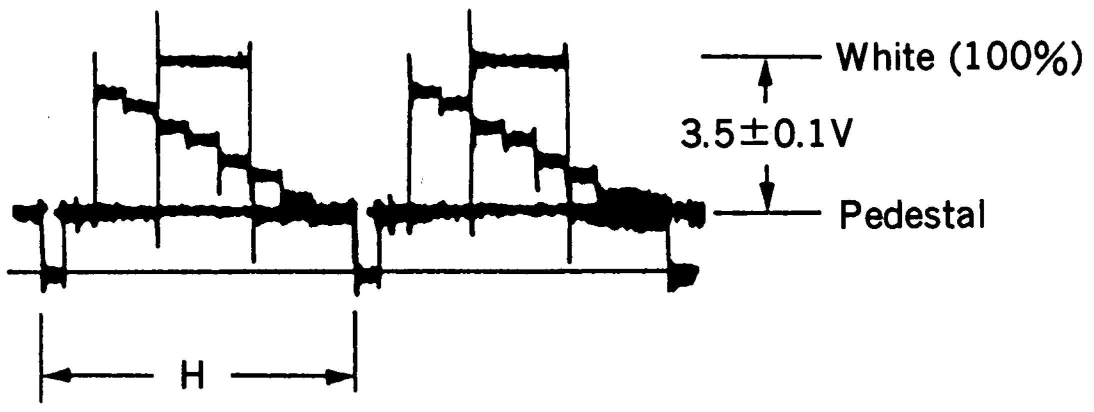


Fig.8-21.

8-6-2. R Gain Adjustment (RG-8 board)

Mode	POWER ON
Signal	Color bar which the chroma signal and the burst signal are turned off
Measurement point	CN002 Pin ⑪
Measuring instrument	Oscilloscope
Adjustment element	RV006
Specified value	3.5±0.1V

[Adjustment Method]

1) Adjust with RV006 so that the voltage between white (100%) and the pedestal is 3.5±0.1V.

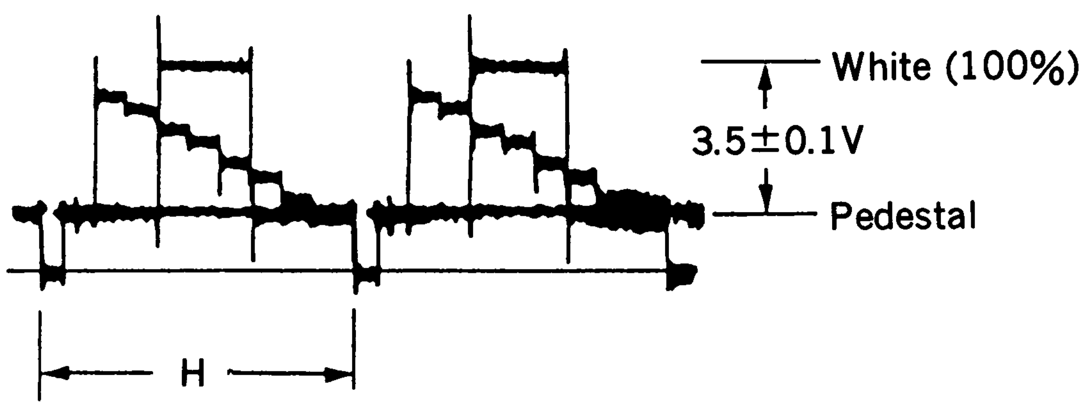


Fig. 8-22.

8-6-3. B Gain Adjustment (RG-8 board)

Mode	POWER ON
Signal	Color bar which the chroma signal and the burst signal are tured off
Measurement point	CN002 Pin ⑪
Measuring instrument	Oscilloscope
Adjustment element	RV003
Specified value	3.1±0.1V

[Adjustment Method]

1) Adjust with RV006 so that the voltage between white (100%) and the pedestal is 3.1±0.1V.

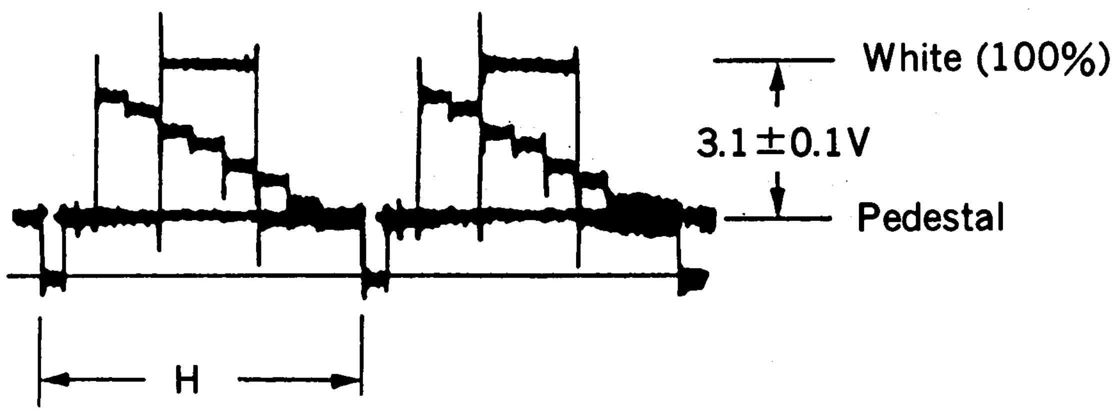


Fig. 8-23.

8-6-4. Sub Bright Adjustment (RG-8 board)

Mode	POWER ON
Signal	Color bar which the chroma signal and the burst signal are turned off
Measurement point	CN002 Pin ⑨
Measuring instrument	Oscilloscope (DC range)
Adjustment element	RV010
Specified value	−3.7±0.1V

[Connection]

1) Install the LCD unit and perform the adjustment.

[Adjustment Method]

1) Adjust with RV010 so that the DC level of the pedestal part of the positive polarity G signal is −3.7±0.1Vdc.

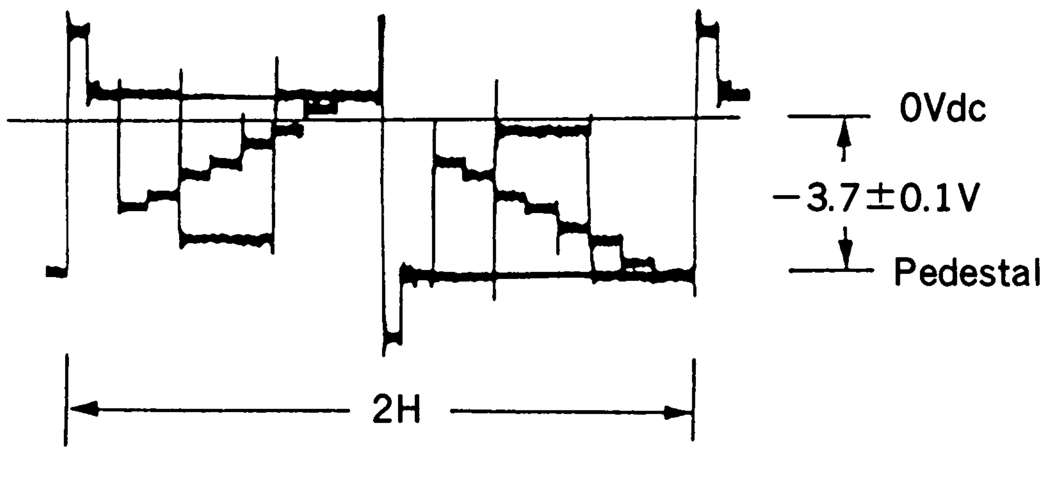


Fig.8-24.

8-6-5. fsc Adjustment (RG-8 board)

Mode	POWER ON
Signal	Video signal which the chroma signal, the burst signal and the Y signal are turned off.(Video signal with only synchronous signal)
Measurement point	IC001 Pin ②
Measuring instrument	Frequency counter
Adjustment element	CV001
Specified value	3549545±300Hz

Note : Connect the frequency counter through the buffer amplifier (oscilloscope, etc) with high impedance (1MΩ or more) and low capacity.

[Adjustment Method]

1) Adjust with CV001 so that the fsc frequency is 3579545± 300Hz.

8-6-6. White Balance Adjustment (RG-8 board)

Mode	POWER ON
Signal	Color bar which the chroma signal and the burst signal are turned off.
Measurement point	Check on the LCD screen
Measuring instrument	
Adjustment element	RV003 (B gain) RV006 (R gain)
Specified value	Screen should not be colored.

[Connection]

1) Perform the adjustment connecting the LCD unit and the back light.

[Adjustment Method]

1) Check that the LCD screen is not colored. If the screen is colored, adjust with RV003 (B gain) and RV006 (R gain).

8-6-7. V COM DC Adjustment (RG-8 board)

Mode	POWER ON
Signal	Color bar which the chroma signal and the burst signal are turned off
Measurement point	LCD screen
Measuring instrument	Oscilloscope
Adjustment element	V COM DC VR on the LCD unit
Specified value	The amplitude of the flicker waveform is the minimum.

Note : Perform the ｢V COM DC adjustment｣ with assembling the LCD block.
Take care that the external light should not enter into the light receiving part of the COMMON voltage adjustment jig.

[Adjustment Method]

1) Expose the light receiving part of the COMMON voltage adjustment jig to the LCD screen. (Point down the LCD screen not to receive the external light.)
2) Connect the oscilloscope with the COMMON voltage adjustment jig.
3) Turn V COM DC VR and check that the flicker waveform as shown in the fig.8-26 is output.
(When the flicker waveform is not output, check the exposing method of the light receiving part and the external light condition, and check with turning the BRIGHT control.)
4) Minimize the flicker waveform amplitude with V COM DC VR.

Note : Turn V COM DC VR slowly because it takes long time to respond to LCD.
The minimum point of the flicker waveform amplitude is nearly coincided with the maximum point of the contrast.

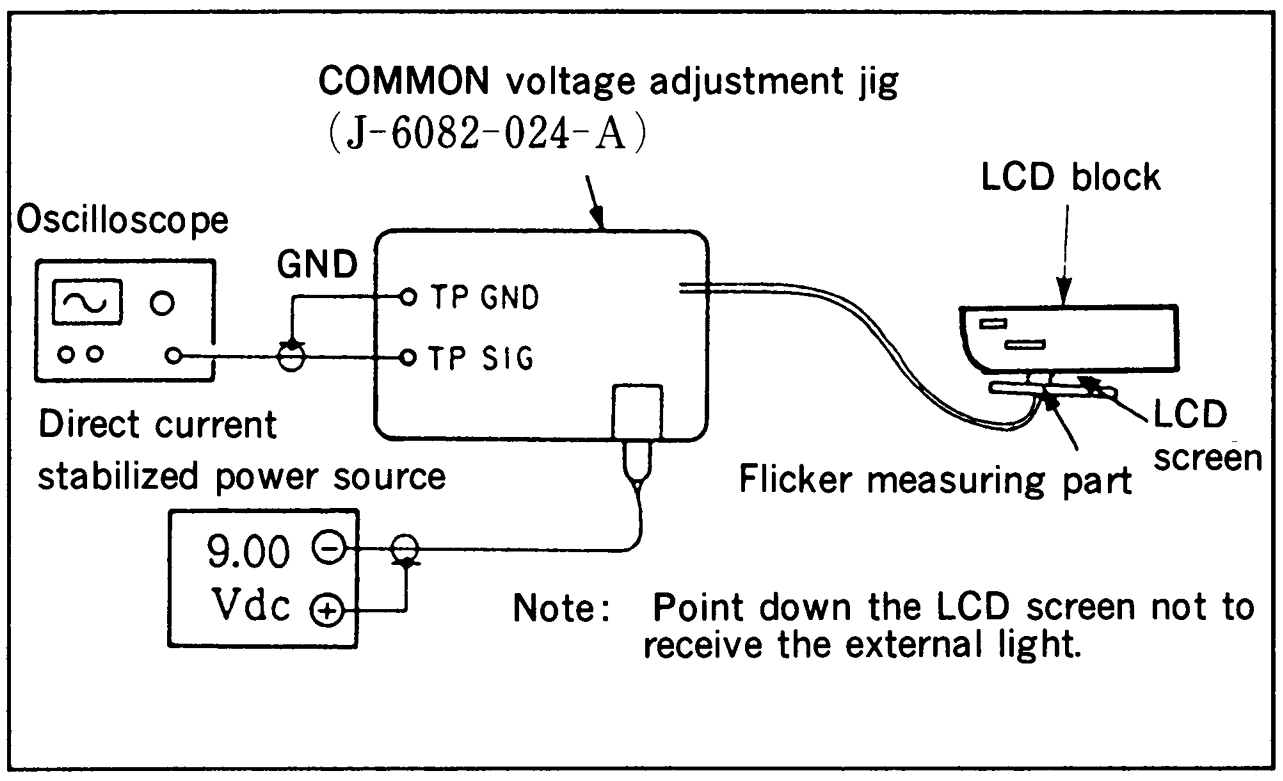

COMMON voltage adjustment jig
(J-6082-024-A)
LCD block
Oscilloscope
GND
TP GND
TP SIG
Direct current
stabilized power source
9.00
Vdc
Flicker measuring part
LCD
screen
Note: Point down the LCD screen not to receive the external light.

Fig.8-25

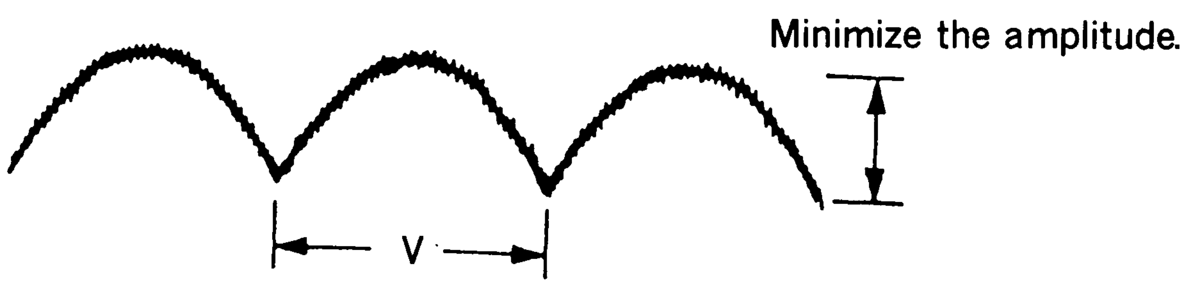

Minimize the amplitude.
V

Fig.8-26.

8-6-8. Character Position Adjustment (RG-8 board)

Mode	POWER ON
Signal	Color bar
Measurement point	LCD screen
Measuring instrument	
Adjustment element	CV801
Specified value	A=B

[Adjustment Method]

1) Press the CLOCK SET button of the LCD block and check that black frame and "AM0 : 00" display on the LCD screen.
2) Make black frame on the right end of the LCD screen with CV801 and adjust so that it dissapears.
3) Press twice the NEXT button of the LCD block and turn off the black frame on the LCD screen. (It takes approximately five seconds to turn off the frame.)

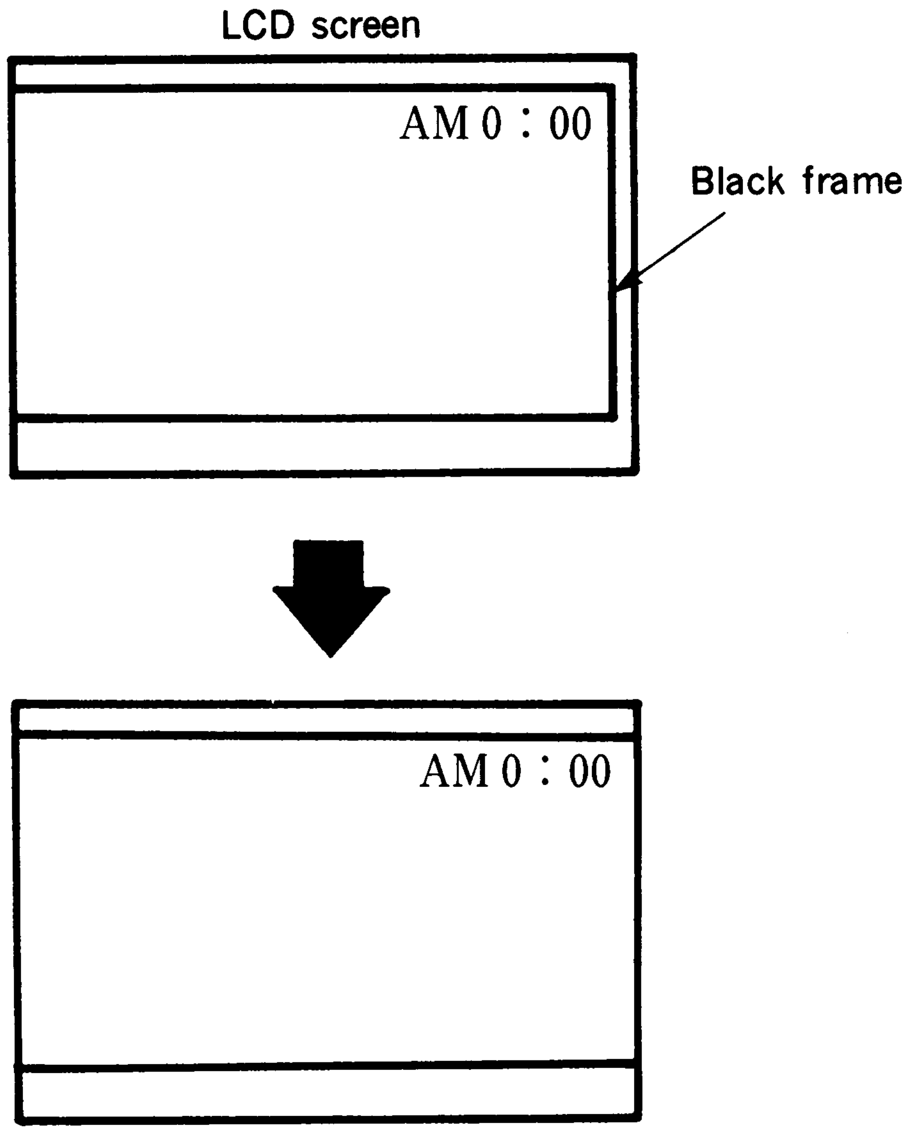


Fig.8-27.

8-7. MARKER SYSTEM ADJUSTMENT

8-7-1. Playback VCO Free Oscillation Frequency Adjustment (SV-38 board)

Mode	Playback
Signal	Optional tape
Measurement point	CL921 (Open side of R928)
Measuring instrument	Frequency counter
Adjustment element	RV923
Specified value	11.58±0.05MHz

Note : Connect the frequency counter through the high impedance and low capacity buffer amplifier (oscilloscope, etc).

[Connection]

1) Short with the jumper wire between the IC922 Pin ① and Pin ⑯ (SW5V).
2) Short with the jumper wire between Q922 Ⓑ and GND.

[Adjustment Method]

1) Adjust with RV923 to 11.58±0.05MHz.
2) After the adjustment, disconnect the jumper wire connected in the preparation.

8-8. TUNER SYSTEM ADJUSTMENT (TU-123 BOARD)

[Notes]

1) The IFT for adjustment (T001 to 004) is such an adjusted coil and is almost properly set that it is not required to turn so much. For adjustment, use an adjustment screwdriver with 0.8mm width (pink TORAY, etc.). Be careful to adjust because it is easy to break.
2) For VR for adjustment(RV001, 003 to 007, 501), use an adjustment screwdriver with 2mm width (yellow TORAY, etc).
3) When adjusting, basically follow the following adjustment procedures.
   When the replacing parts are designated, however, omit some adjustment procedures if they are required.

[Adjustment Procedures]

Note) When performing the adjustment in 1) to 4), remove the cutland soldering between the TU001 IF terminal and R006, and input the designated sisnal through the R006 side.

1) FAS adjustment (When replacing T001, C019, 020)
2) P.REF adjustment (When replacing IC001)
3) AFT adjustment (When replacing IC001)
4) S.REF adjustment (When replacing IC001)

Note) After the adjustment of 1) to 4), reinstall the cutland soldering.

5) MPX LEVEL adjustment (When replacing IC002, CF002)
6) FILTER adjustment (When replacing IC003)
7) VCO adjustment
8) Separation adjustment
9) RF AGC adjustment

8-8-1. FAS Adjustment (TU-123 board)

Adjust when replacing T001, C019, 020.

Signal input	Remove the cutland soldering of the IF terminal, and input from the R006 side of the cutland.
Signal	47.25MHz, −20dBm carrier signal
Measurement point	Q001 collector
Measuring instrument	Oscilloscope
Adjustment element	T001
Specified value	The minimum of the output level

[Adjustment Method]

1) Adjust with T001 so that the output level is the minimum.

8-8-2. P.REF Adjustment (TU-123 board)

Adjust when replacing IC001.

Signal input	Remove the cutland soldering of the IF terminal, and input from the R006 side
Signal	45.75MHz, −20dBm Carrier signal
Measurement point	IC001 Pin ①
Measuring instrument	Oscilloscope (DC range)
Adjustment element	T002
Specified value	The minimum of the DC level

[Adjustment Method]

1) Adjustment with T002 so that the DC level is the minimum.

8-8-3. AFT Adjustment (TU-123 board)

Adjust when replacing IC001.

Signal input	Remove the cutland soldering of the IF terminal, and input from the R006 side
Signal	45.75MHz, −20dBm Carrier signal
Measurement point	IC001 Pin ⑭
Measuring instrument	Oscilloscope (DC range)
Adjustment element	T003
Specified value	2.3±0.1Vdc

[Adjustment Method]

1) Adjust with T003 to be 2.3±0.1Vdc.

8-8-4. S.REF Adjustment (TU-123 board)

Adjust when replacing IC002.

Signal input	Remove the cutland soldering of the IF terminal, and input from the R006 side
Signal	45.75MHz, −20dBm Carrier signal
Measurement point	IC002 Pin ①
Measuring instrument	Oscilloscope (DC range)
Adjustment element	T004
Specified value	The minimum of the DC level

[Adjustment Method]

1) Adjust with T004 so that the DC level is the minimum.

8-8-5. MPX LEVEL Adjustment (TU-123 board)

Adjust when replacing IC002 and CF 002.

Signal	400Hz, 100%MOD (±25kHz dev.) See Fig. 8-28
Measurement point	IC003 Pin ㊳
Measuring instrument	Oscilloscope
Adjustment element	RV003
Specified value	0.70±0.03Vp-p

[Connection]

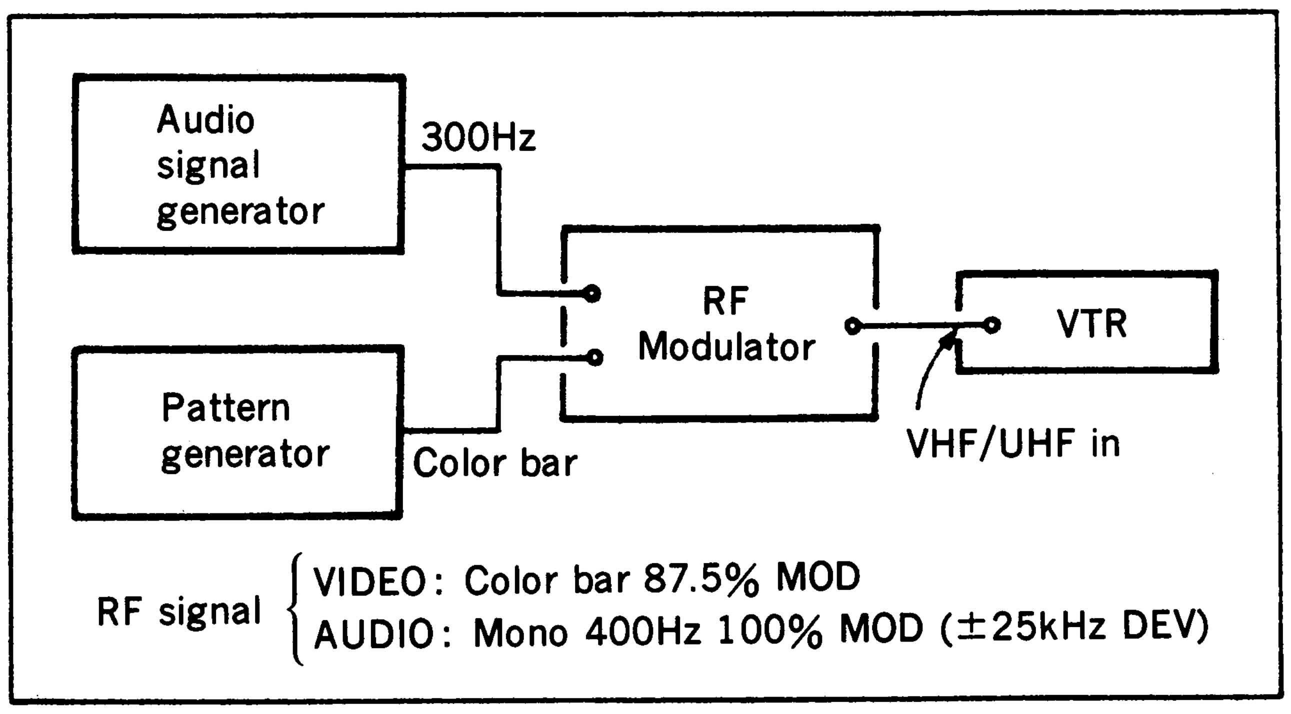


Fig. 8-28.

[Adjustment Method]

1) Adjust with RV003 to 0.70±0.03Vp-p.

8-8-6. FILTER Adjustment (TU-123 board)

Adjust when replacing IC003.

Signal input	Short the negative side of C073 with GND, and input signal to IC003 Pin ㊳ through the capacitor of 1μF.
Signal	23.6kHz, 0dBm Carrier signal
Measurement point	IC003 Pin ㉞
Measuring instrument	Oscilloscope
Adjustment element	RV007
Specified value	The minimum of the amplitude

[Adjustment Method]

1) Adjust with RV007 so that the amplitude is the minimum.

8-8-7. VCO Adjustment (TU-123 board)

Signal input	Short the negative side of C073 with GND, and input signal to IC003 Pin ㊳ through the capacitor of 1μF.
Signal	No signal and 15.734kHz, 0dBm Carrier signal
Measurement point	IC003 Pin ㊴
Measuring instrument	Oscilloscope (DC range)
Adjustment element	RV006
Specified value	The DC level at no-signal, at 15.734kHz and at input of the 0dBm carrier signal is the same.

[Adjustment Method]

1) Adjust with RV006 so that the DC level at no-signal, at 15,734kHz, and at input of the 0dBm carrier signal is the same.

Note) Too much turning RV006 will cause that the DC level is not allowed to change. The point to adjust is where the DC level changes and the DC level is the same position as that of no-signal.

8-8-8. Separation Adjustment (TU-123 board)

Signal	● MPX signal : See table ● Connection : See Fig. 8-29
Measurement point	CN001 Pin ⑬(Rch out) CN001 Pin ⑮ (Lch out)
Measuring instrument	Oscilloscope
Adjustment element	RV004, RV005
Specified value	The minimum of the Crosstalk

[Signal]

Signal	Modulation
Stereo Pilot Signal	ON
Main Channel Signal	Lch : 400Hz, 30% Rch : 2kHz, 30% NOISE REDUCTION : ON PRE EMPHASIS : ON
Sub Channel Signal	

[Connection]

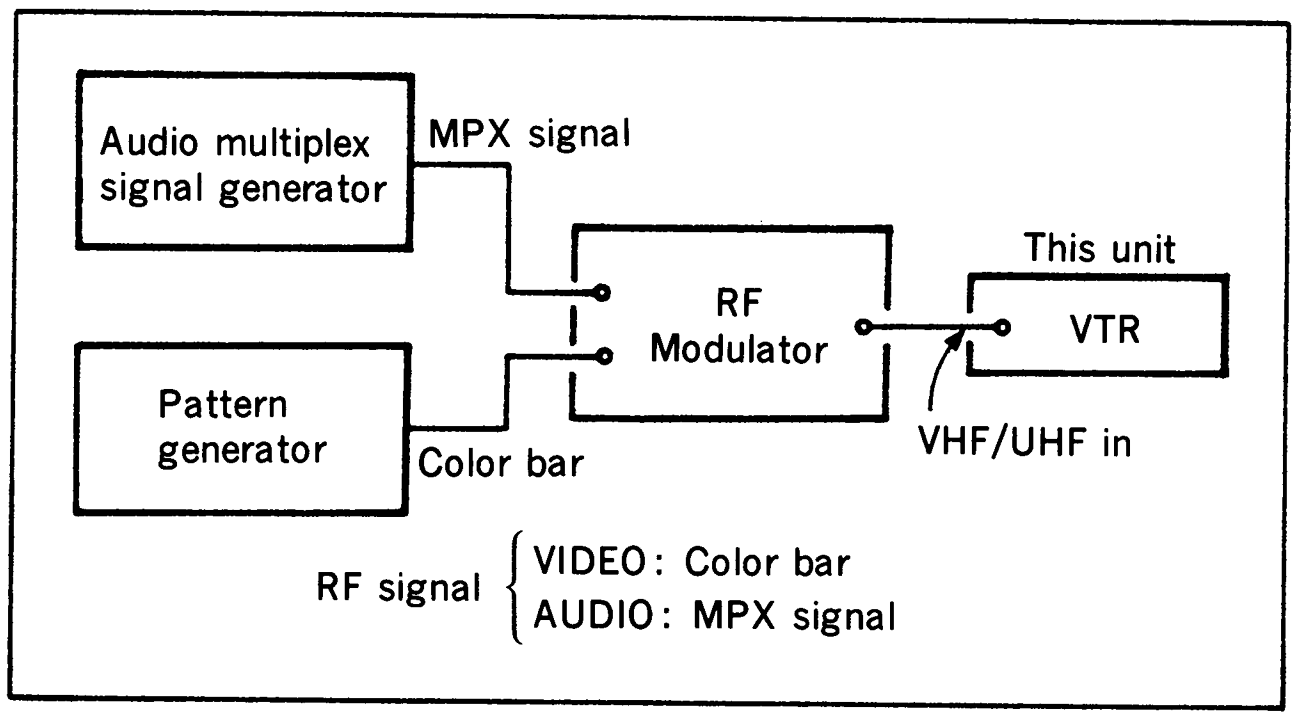

Audio multiplex signal generator
MPX signal
This unit
RF Modulator
VTR
Pattern generator
Color bar
VHF/UHF in
RF signal
VIDEO: Color bar
AUDIO: MPX signal

Fig.8-29

[Adjustment Method]

1) Adjust with RV004 and 005 so that the crosstalk is the minimum.

8-8-9. RF AGC Adjustment (TU-123 board)

Mode	E-E
Signal	Broadcast TV signal
Adjustment element	RV001

[Adjustment Method]

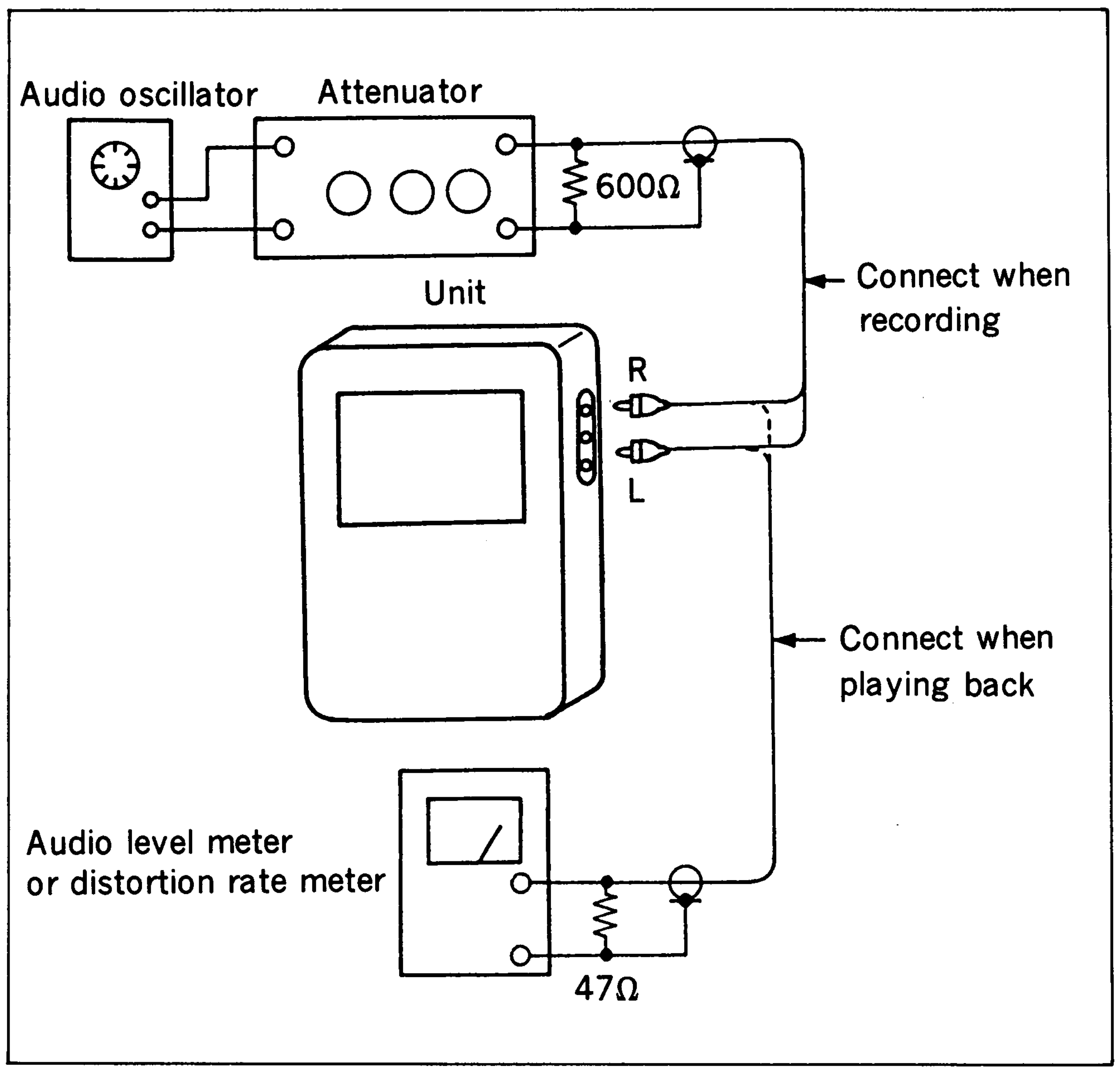
1) Connect the monitor TV.
2) Adjust the monitor TV to the most proper contrast and receive the broadcast TV signal.
3) Turn RV001 to show the snow noise.
4) Turn RV001 in the reverse direction, and set to the point that the snow noise disappears.
5) Receive each channel and check that there is no beat by the cross modulation, picture distortion and snow noise.

8-9. AUDIO SYSTEM ADJUSTMENT

- Adjust using the color bar signal as the video signal input.

[Connection of the measuring instruments for audio]

Connect the audio system measuring instruements as shown in the following figure as well as the video system measuring instruments. Set the power switch to the ｢VTR｣ side if there is no special direction.



Audio oscillator
Attenuator
600Ω
Unit
Connect when recording
R
L
Connect when playing back
Audio level meter or distortion rate meter
47Ω

Fig.8-30.

[VIDEO/AUDIO terminal of the unit]

The VIDEO and AUDIO (L/R) terminal has a function both input and output. The operation as the input terminal or as the output terminal is automatically selected according to the operation mode of the unit.
When connecting with other instruements, perform according to input-ouput of the terminal.

Operation mode of the unit and the input-output automatic selection of the terminal

Input mode selected with the INPUT SELECT button	The case that the unit is stopped or the recording mode is set	The case that the unit is set to the playback mode
TUNER (Television screen)	Output	Output
LINE*	Input	Output
CAMERA	Output	Output

*When the LINE is selected with the INPUT SELECT button, the display of INPUT and OUTPUT is shown.

[Setting of the switches]

Set the following mode if there is no special direction.

- SP/LP button ········SP
- INPUT SELECT button ········LINE
- AUTO STEREO switch ········ON
- LINE AUDIO button········ST
- AUDIO MONITOR button········(S) and MAIN

[Notes]

- When the sound signal is input, input the same signal to both L and R channel if there is no special direction.
- Be sure to insert a plug (shorting plug or dummy plug) to the AUDIO R input-output terminal if there is no special direction. When a plug is not inserted, the monaural mode is set and the proper adjustment is not performed.
  (Monaural mode)
  At recording········REC AFM RF 1.7MHz carrier is not ouput.
  At playing back ········L+R signal is output from the AUDIO L input-output terminal.

[Adjustment Procedures]

1.5MHz carrier frequency adjustment
1.7MHz carrier frequency adjustment
E-E output level check
1.5MHz carrier level check
1.7MHz carrier level adjustment
1.5MHz deviation adjustment
1.7MHz deviation adjustment note)
Recording matrix L+R adjustment
Recording matrix L−R adjustment
Playback matrix adjustment
Total level characteristic separation check
Total distortion rate check

Note) The adjustment method of the 1.7 MHz deviation adjustment is shown later.

8-9-1. 1.5MHz Carrier Frequency Adjustment (AU-53 board)

Mode	Recording
Signal	No signal
Mesurement point	IC101 Pin ⑬
Meauring instrument	Frequency counter
Adjustment element	RV102
Specified value	1.50±0.02MHz

Note : Use the 10 : 1 probe for connecting the frequency counter.

[Connection]

1) Short with the jumper wire between IC113 pin ㉕ (PLL PB) and CN101 Pin ① (SW 5V).

[Adjustment Method]

1) Adjust with RV102 to 1.5±0.02MHz.
2) Keep the jumper wire for connecting and perform the 1.7MHz carrier frequency adjustment.

8-9-2. 1.7MHz Carrier Frequency Adjustment (AU-53 board)

Mode	Recording
Signal	No signal
Mesurement point	IC201 Pin ⑬
Meauring instrument	Frequency counter
Adjustment element	RV202
Specified value	1.70±0.01MHz

Note : Use the 10 : 1 probe for connecting the frequency counter.

[Connection]

1) Short with the jumper wire between IC113 pin ㉕ (PLL PB) and CN101 Pin ① (SW 5V).

[Adjustment Method]

1) Adjust with RV202 to 1.70±0.01MHz.
2) After the adjustment, disconnect the jumper wire.

8-9-3. E-E Output Level Check

Mode	Camera recording
Signal	CN-6 board J601 Pin ⑤ [Pin ⑨] 400Hz, −15dBs
Measurement point	AUDIO L [R] Input-output terminal
Measuring instrument	Audio level meter
Specified value	−7.5±2dBs

[Checking Method]

1) Check that the 400Hz signal is −7.5±2dBs.

8-9-4. 1.5MHz Carrier Level Check (AU-53 board)

Mode	Recording
Signal	No signal (Both L and R 600Ωterminal)
Measurement point	CN102 Pin ③
Measuring instrument	Oscilloscope
Specified value	128±10mVp-p

[Preparation]

1) Terminate both L and R AUDIO terminals at 600Ω. The pin plug should not be inserted to the R terminal. (For setting to the monaural mode)

[Checking Method]

1) Check that the 1.5MHz REC AFM RF signal level is 128±10mVp-p. (Read the center level of the luminescent width.)

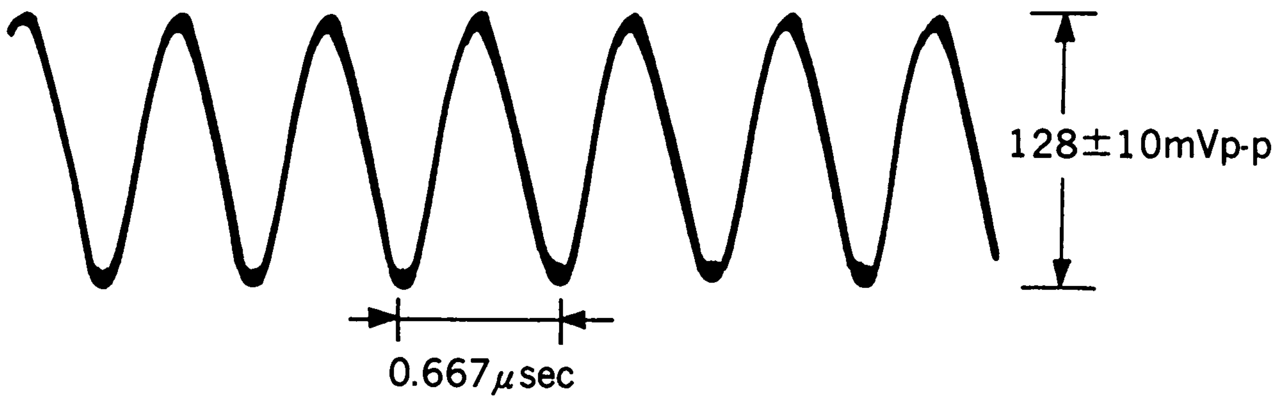


Fig.8-31.

8-9-5. 1.7MHz Carrier Level Adjustment (AU-53 board)

Mode	Recording
Signal	No signal (Both L and R 600Ωterminal)
Measurement point	CN102 Pin ③
Measuring instruement	Oscilloscope
Adjustment element	RV203
Specified value	(1.5MHz carrier level)−(1.7MHz carrier level)=27±10mV

[Preparation]

1) Terminate both L and R AUDIO terminals at 600Ω. Check that the dummy plug is inserted to the R terminal. (For setting the stereo mode)

[Adjustment Method]

1) Connect the capacitor of 0.01μF between IC201 pin ⑭ and GND.
2) Measure the 1.5MHz carrier level by the oscilloscope and write it down.
3) Disconnect the capacitor connected in the procedure 1).
4) Connect the capacitor of 0.01μF between IC101 Pin ⑭ and GND.
5) Measure the 1.7MHz carrier level by the oscilloscope and adjust with RV 203 to (1.5MHz carrier level)−(1.7MHz carrier level)=27±10mV.
6) Disconnect the capacitor connected in the procedure 4).

8-9-6. 1.5MHz Deviation Adjustment (AU-53 board)

Mode	Playback
Signal	Alignment tape: for operation check (WR5-4NSP)
Measurement point	CN101 Pin ⑤
Measuring instruement	Oscilloscope
Adjustment element	RV101
Specified value	925±21mVp-p (−7.5±0.2dBs)

[Adjustment Method]

1) Adjust with RV101 so that the 400Hz signal level is 925±21mVp-p.

8-9-7. Recording Matrix L+R Adjustment (AU-53 board)

Mode	Recording
Signal	1. 400Hz, −7.5dBs AUDIO L input-output terminal Input 2. 400Hz, −7.5dBs AUDIO R input-output terminal Input
Measurement point	IC104 Pin ①
Measuring instruement	Oscilloscope
Adjusment element	RV401
Specified value	The level difference at the L terminal input and the R terminal input is 0±5mVp-p.

Note: Measure the signal level after passing one minute or more from the signal input.

[Adjustment Method]

1) Input 400Hz and −7.5dBs signal to the AUDIO L input-output terminal. (Insert the shorting plug to the R terminal.)
2) Read the signal level of IC104 Pin ① and write it down.
3) Input 400Hz and −7.5dBs signal to the AUDIO R input-output terminal.
   (Insert the shorting plug to the L terminal.)
4) Adjust with RV401 so that the signal level of IC104 Pin ① is ±5mVp-p measured in the procedure 2).

8-9-8. Recording Matrix L−R Adjustment

Mode	Recording
Signal	400Hz, −7.5dBs Input to the both L and R terinal of AUDIO input- output terminal.
Measurement point	IC105 Pin ①
Measuring instrument	Oscilloscope
Adjustment element	RV402
Specified value	0±10mVp-p

Note : Use the 1 : 1 probe.

[Adjustment Method]

1) Adjust with RV402 so that the signal level of IC106 Pin ① is 0±10mVp-p.

8-9-9. Playback Matrix Adjustment (AU-53 board)

Mode	Playback
Signal	Alignment tape : for AFM stereo operation check (WR5-9NS)
Measurement point	CN101 Pin ⑤ and Pin ⑦
Measuring instruement	Oscilloscope
Adjustment element	RV204
Specified value	The distortion of the 400Hz output waveform of CN101 pin ⑤ and the 1kHz output waveform of pin ⑦ is the minimum.

[Adjustment Method]

1) Adjust with RV204 so that the distortion of the 400Hz output waveform of CN101 pin ⑤ and the 1kHz output waveform of pin ⑦ is the minimum.

8-9-10. Total Level Characteristic Separation Check

Mode	Self playback
Signal	400Hz, −7.5dBs : AUDIO L [R] input-output terminal No signal (Insert a shorting plug.) : AUDIO R [L] input-output terminal
Measurement point	AUDIO L [R] input-output terminal
Measuring instrument	Audio level meter
Specified value	Signal level : −7.5±2dBs Cross talk level : −25.0dBs or less

Note : Be sure to insert the dummy plug to the R terminal when measuring the L side playback output level.

[Checking Method]

1) Record the signal.
2) Connect the audio level meter to the AUDIO L [R] input-output terminal.
3) Play back the recorded part and check that the L [R] output signal level is −7.5±2dBs.
4) Check that the R [L] output cross talk level is −25.0dBs or less.

8-9-11. Total Distortion Rate Check

Mode	Self playback
Signal	400Hz, −7.5dBs Input both L and R AUDIO input-output terminals
Measurement point	AUDIO L [R] input-output terminal
Measuring instrument	Distortion Rate Meter
Specified value	1.2% or less

Note : Be sure to insert the dummy plug to the R terminal when measuring the L side playback distortion rate.

[Checking Method]

1) Record the signal.
2) Connect the distrotion rate meter to the AUDIO L [R] input-output terminal.
3) Play back the recorded part and check that the distortsion rate of the L [R] output is 1.2% or less.

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